

DL 83

NO. 7

textile

JULY, 1957

bulletin

One-Price Cotton: Will it ever be allowed? 43
Notes from the annual convention of the S.T.A. 54
Some tips on finishing blends of Dacron and cotton 83

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JACOBS CASTEEL DOBBY CORDS

Give You These Great Improvements

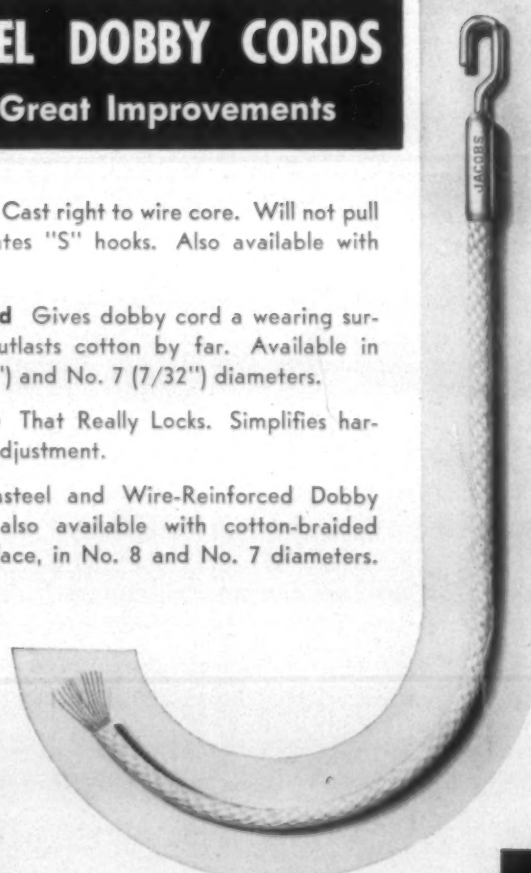
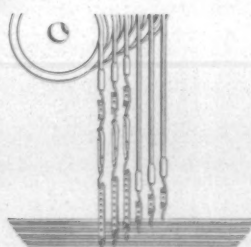


Open End Cast right to wire core. Will not pull out. Eliminates "S" hooks. Also available with closed eye.

Nylon Braid Gives dobbie cord a wearing surface that outlasts cotton by far. Available in No. 8 (8/32") and No. 7 (7/32") diameters.

Turnbuckle That Really Locks. Simplifies harness frame adjustment.

Jacobs Casteel and Wire-Reinforced Dobby Cords are also available with cotton-braided wearing surface, in No. 8 and No. 7 diameters.



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In **KNITTING**

(as in Weaving and Spinning)

you have to **COUNT**

to get **Accurate**

COUNTROL of

Production and Costs

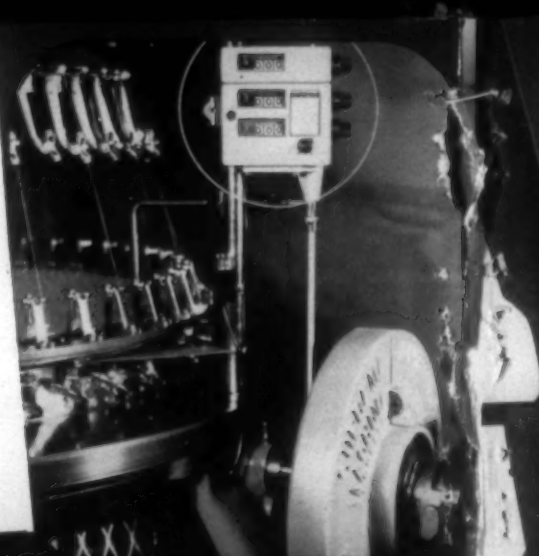


3-Shift Revolution Counter.

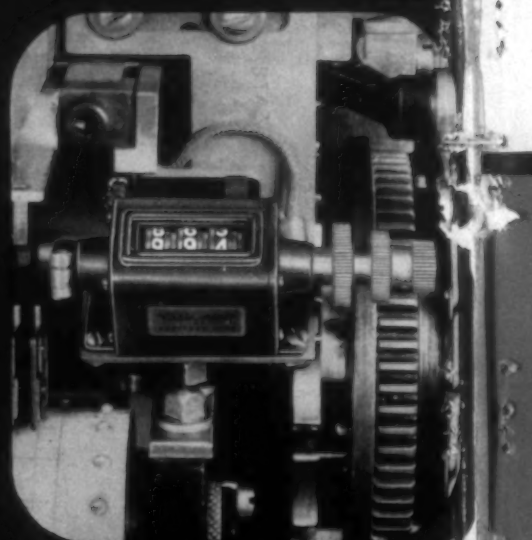
Every knitting machine . . . in fact, every process in every knitting mill . . . needs to be under a modern system of Veeder-Root Control. This system can be shaped to your own needs . . . so you will have a continuous, up-to-the-minute check on production scheduling . . . costs . . . quality . . . lengths

...over-runs...shortages...and any other facts in figures you may need.

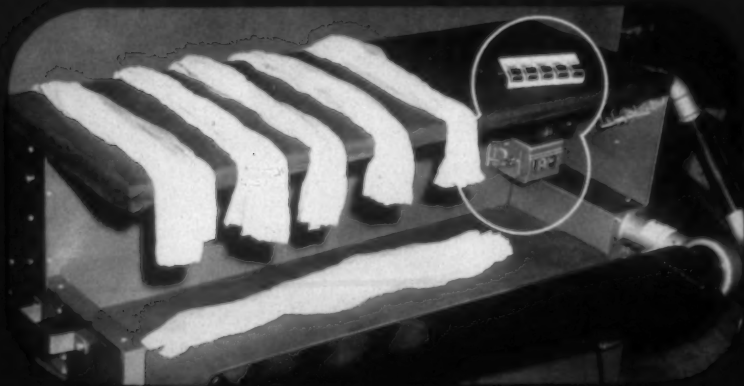
Remember, paperwork doesn't mean a thing, *unless you have accurate Control*. And you can count on Veeder-Root to help you in every possible way. Write:



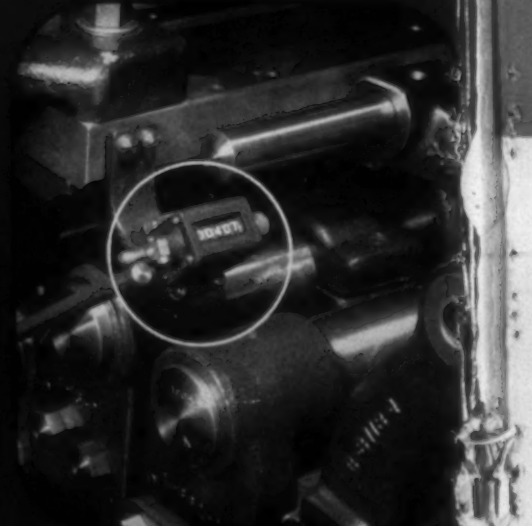
3-shift Revolution Counter on Supreme Knitting Machine.



Small Subtractive Predetermining Counter on Philadelphia Jacquard Knitting Machine.



Vary Tally and Large-Figure Hosiery Dozens Counter on Specialty Mfg. Company's "Inspectomatic" Table.



Small Reset Ratchet Counter on Textile Machine Works' full-fashioned hosiery machine.

VEEDER-ROOT

"The Name that Counts"

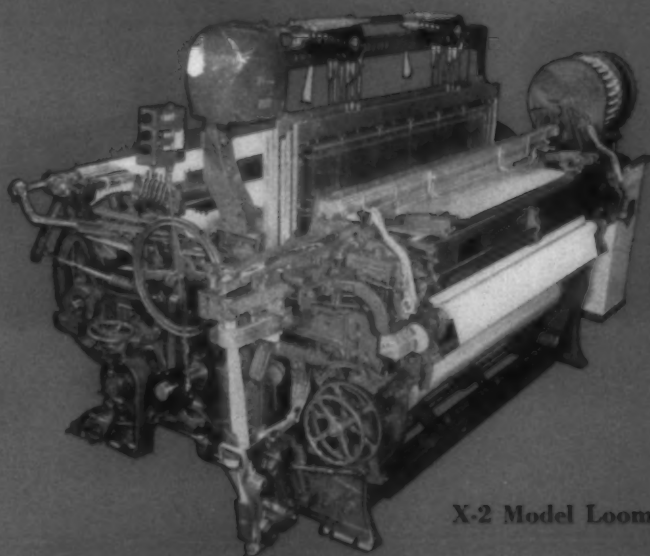
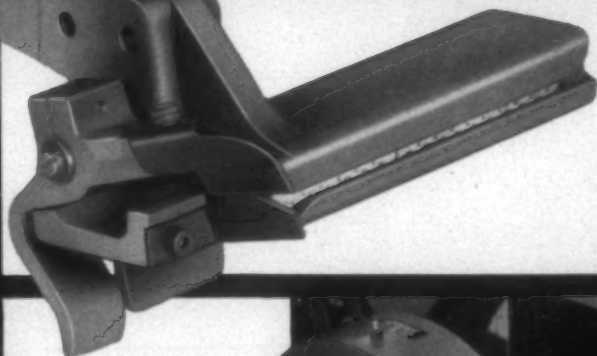
Hartford, Conn. • Greenville, S. C. • Chicago • New York • Los Angeles
San Francisco • Montreal • Offices and Agents in Principal Cities



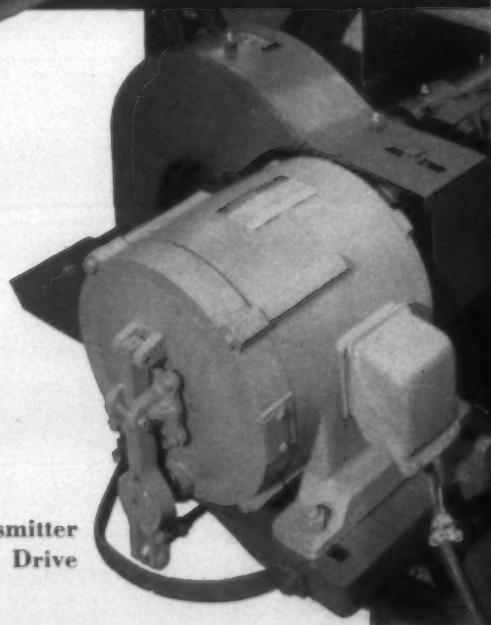
Clamping Sword Construction
X-2 type illustrated.
Similar swords available for
X series and E model looms.

Cam Shaft Gear and Hub
X-2 assembly illustrated.
Similar assemblies available
for XD and XP model looms.

#524 Temple
Currently available
for X and X-2 models.



X-2 Model Loom



**Transmitter
Type Drive**

Next to new looms . . .

Looms equipped with the latest mechanisms and improved repair parts, *designed and built by the original manufacturer*, will meet today's rugged performance requirements.

Draper improved repair parts and mechanisms — some of which are illustrated above — are designed to increase loom production, efficiency, and flexibility.

Lower maintenance costs and ease of application are additional benefits derived from the use of Draper repair parts and mechanisms.

Equipped with Draper improved repair parts and assemblies, your existing looms will be second only to *new Draper looms*.



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Dayton ThoroCheck
Dayton ThoroCheck
Dayton ThoroCheck
Dayton ThoroCheck

How to improve picker action and reduce costs in the 3 vital areas of shock and wear

Better shuttle control, improved picker-stick checking and lower maintenance costs result when Dayton Loop Pickers, Check Straps and Lug Straps are installed in combination.

Mill supervisors have learned the important savings to be had from Dayton Thorobred Loop Pickers, Endless ThoroCheck Straps or Thorobred Lug Straps, alone. Now, they are reasoning, the way to get even greater advantages is to install the *entire* combination. Scientifically engineered and designed to work *together*, Dayton picking products are built to take the tremendous shock of high speed shuttles, smoothly check picker sticks and accurately deliver the shuttle return. Service life runs 2 to 3 times longer than other similar products. They offer valuable protection to costly loom parts while reducing down-time and replacement costs.

Dayton Thorobred Loop Picker's long service, resistance to wear and accurate shuttle catch are directly traceable to their scientific construction. Their tilted shape assures perfect contact, without strain. Accurate seating

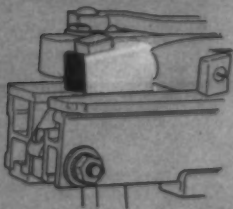
to guard against tearing the loop ply is assured by a flared bottom and tapered picker hole design. As a result, they seat snugly into position and cushion millions of contacts without visible wear. Smooth, rounded corners prevent jerked-in fillings.

Dayton Endless ThoroCheck Straps are built to provide strain-free, graduated checking action that eliminates drag over stick. They give fast, Monday morning starts because they're unaffected by temperature or humidity—are not subject to permanent elongation. They outlast other straps repeatedly, in mill tests, by 6 to 8 months. The longitudinal cord adds strength for long, economical service.

Dayton Thorobred Deluxe Lug Straps give longer service because of their one-piece, link-free construction. A molded-in plug absorbs the terrific shock of picker-stick thrusts to add even greater protection for costly loom parts.

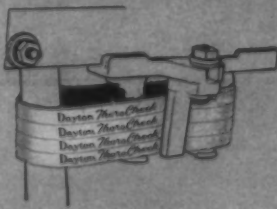
Try any of these amazing Dayton products for immediate improvement in your picking operation. For maximum results and really substantial savings—install the entire Dayton Picking Combination. Your Dayton representative will be calling on you soon to help you get started. Dayton Rubber Co., Textile Division, 401 S. Carolina National Bank Bldg., Greenville, S. C.

Dayton Thorobred Loop Picker



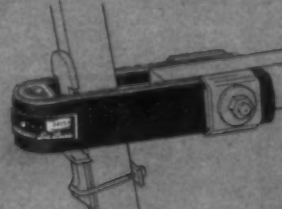
New Design! Narrow back eliminates wear on lay end strap.

Dayton ThoroCheck Straps



Extra economy! Can be replaced singly or in sets.

Dayton Thorobred Deluxe Lug Straps

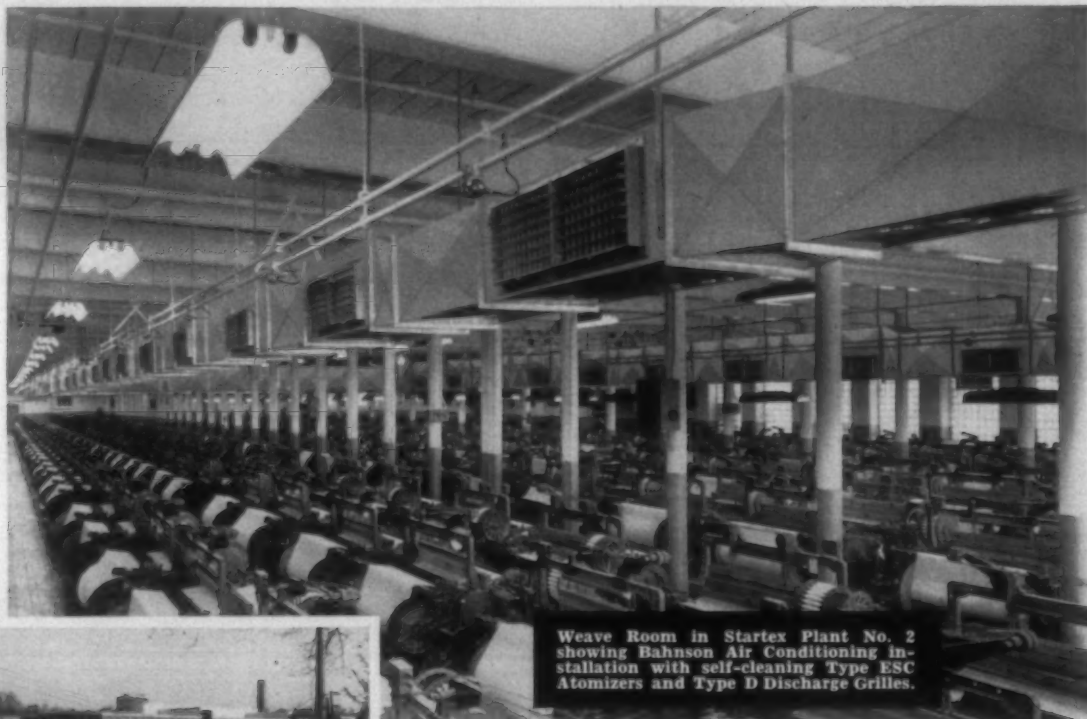


One-piece construction! No rivets or other parts to work loose.

Dayton Rubber

Dayco and Thorobred Products for Better Spinning and Weaving

BAHNSON CENTRAL STATION AIR CONDITIONING with capacity for more than a million cubic feet of air every minute installed at **STARTEX** Mills



Weave Room in Startex Plant No. 2 showing Bahnson Air Conditioning installation with self-cleaning Type ESC Atomizers and Type D Discharge Grilles.



Exterior view of Startex plants at Startex, S. C.

“ To air condition the plants of Startex Mills, Division of Spartan Mills, Spartanburg, S. C., our engineers designed a Central Station System with refrigeration and high quality components, built for long life and dependable service. Careful attention was given to Startex's requirements in each plant, in each room. Features such as Bahnson axial-flow fans and functional apparatus towers housing Bahnson air washers with stainless steel hinged eliminators help provide top performance and operating efficiency.

The Bahnson Company has the experience, know-how, and complete facilities to assist you with your air conditioning needs. Write me directly at the Bahnson Co., Dept. R, for full information. Ask for Bulletin 22A.

”



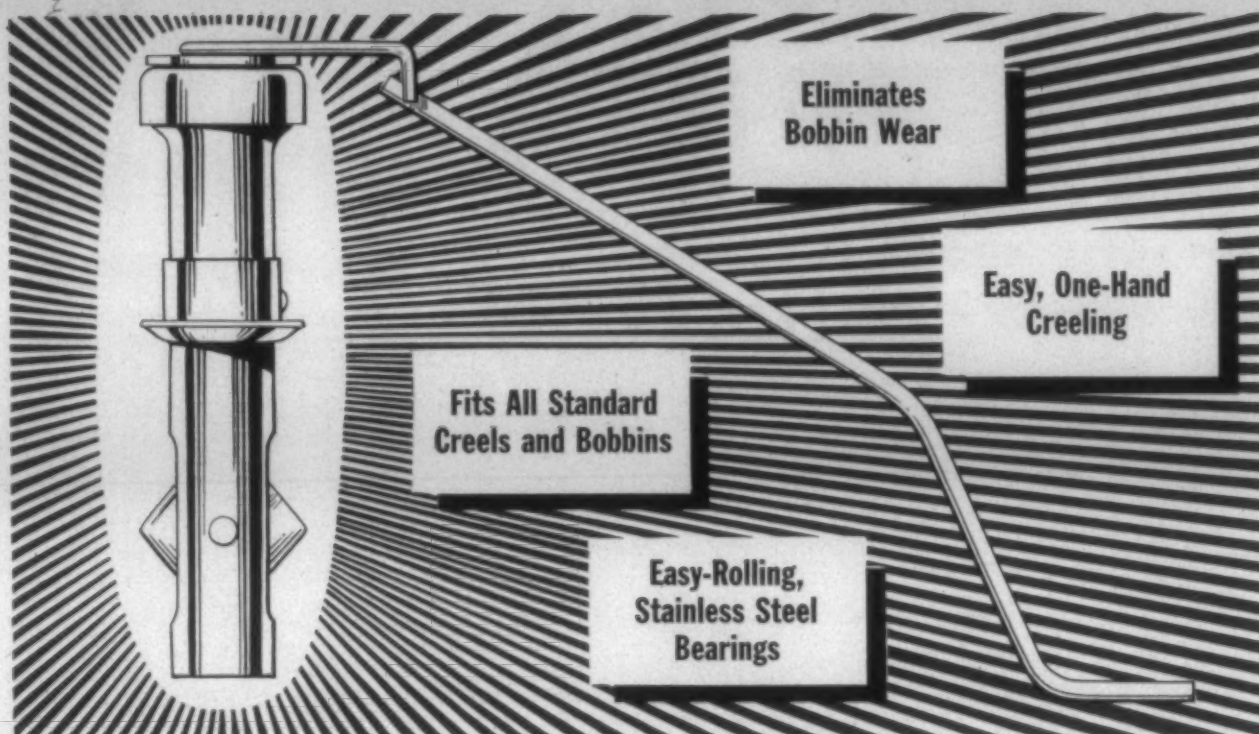
Agnew Bahnson Jr.
President
The Bahnson Company

91 of the top 100

Of the nation's top 100 textile mills 91 are users of Bahnson equipment

Bahnson
COMPANY
WINSTON SALEM, N. C.

AIR CONDITIONING
HUMIDIFICATION
VACUUM COLLECTION
CLEANING
CREELS



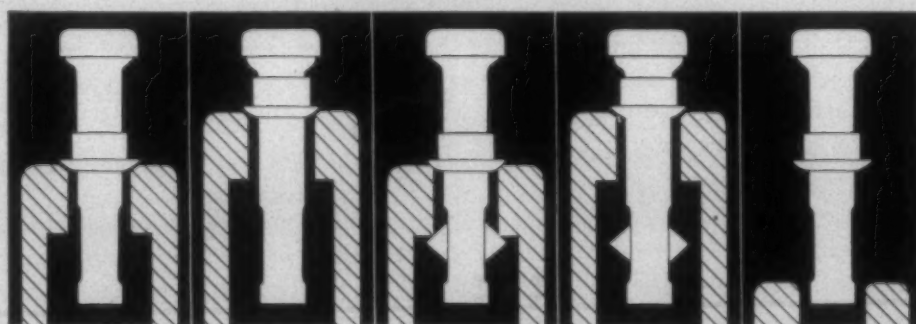
IT'S HERE! THE ALL-NEW BENDIX SPIN-MASTER BOBBIN HOLDER!

Here's the greatest improvement in bobbin holder design in many years—the Bendix® Spin-Master! Made by the manufacturers of the reliable Eclipse Bobbin Holder, the Spin-Master is adaptable to *all types* of creels and to practically *all sizes* of bobbins. Its exclusive nylon latch holds the bobbin securely yet does not gouge or wear the

bearing surface. Because of its unique design, the Spin-Master makes creeling a one-hand operation. Its extra-free rolling action is superior to that provided by any other bobbin holder. And, of course, it is thoroughly corrosion resistant. Order today, or, if you prefer, write for additional information.

*REG. U.S. PAT. OFF.

HERE'S HOW IT WORKS



Bobbin holder slides easily and freely into top of bobbin. Nylon latch is concealed within the barrel of the holder.

Bobbin is pushed up against collar of bobbin holder. At this point, latch is still concealed inside the bobbin holder.

As bobbin is allowed to drop, collar of bobbin holder slides down to original position and latch snaps into place, suspending bobbin.

To release bobbin from holder, the bobbin is again pushed up, raising the collar of the holder. Latch is still securely in place.

When bobbin is again allowed to drop, latch retracts into body of bobbin holder, so that bobbin may be easily removed.

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ECLIPSE MACHINE DIVISION



It's as simple
as this....

WHITIN



In top-flight quality mills, high production mills and specialty mills, on every fiber, Whitin Roving frames are acknowledged leaders.

This distinct mill preference is based on a solid record of unbeatable production, evenness of roving produced, the flexibility and performance of Whitin drafting systems. Advanced in design and having every desirable mechanical improvement, these frames have set new high standards of operation, with lowest costs per pound for direct labor, maintenance and total cost.

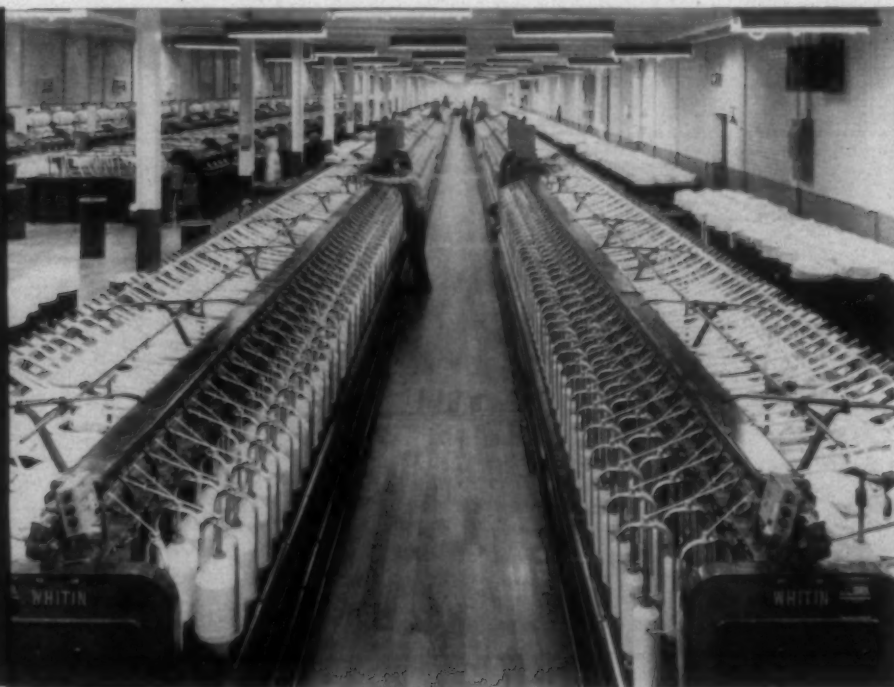
PROVING FRAMES

give you Better Roving at Lower Cost

The data below is an example of the production and cost advantages you can secure with Whitin Roving frames. The figures are based on actual

operating conditions in a mill producing 162,000 lbs. per 144 hr. week of 80x80, 39" 4.00 high quality print cloth with 31's warp and 41's filling.

	For 31's Warp	For 41's Filling		For 31's Warp	For 41's Filling
Hank Roving	1.00	1.30	Wt./Roving/Bobbin	54 oz.	54 oz.
Spindle R. P. M.	725	725	Spindles per frame	96	96
Front Roll Speed	178	139	Spindles Required	1279	
T. Multiplier	1.15	1.30		Spindles, 14 frames used 1344	
% Efficiency	88	88		Fr./Operator 5-5-4	
Lbs./Spdle./Hr.	1.10	.660			
Lbs./Spdle./144 Hrs.	158.4	95.0	Cost per lb. for direct labor . . . \$.00391	
Size of Bobbin	12"x6 1/2"	12"x6 1/2"			



Photos courtesy of
DUNDEE MILLS, Incorporated
Griffin, Georgia



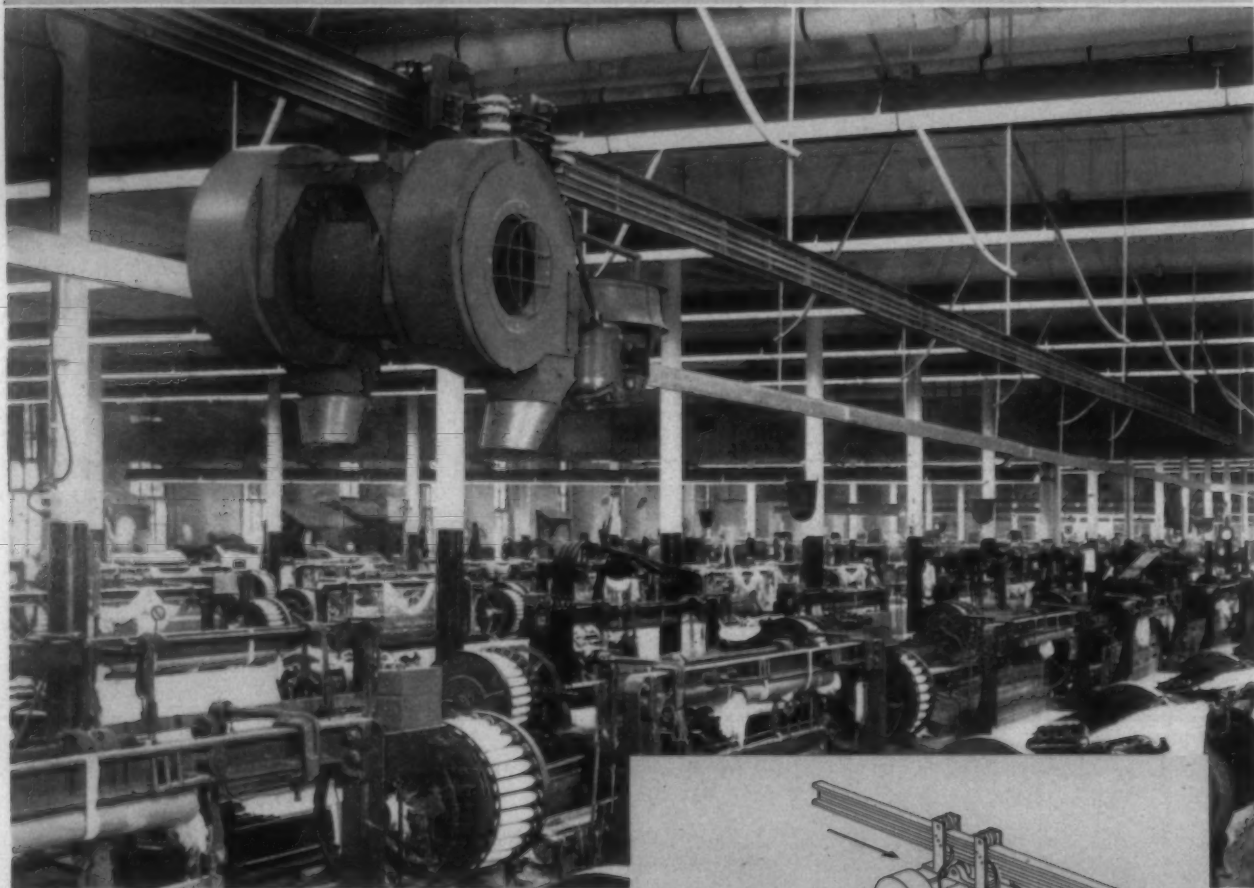
For complete information, ask your Whitin representative — or write direct to us.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

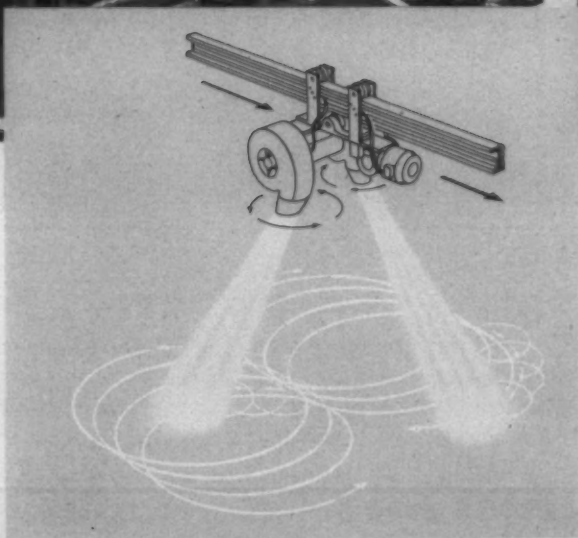
CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

Amco Introduces its New **Heliclone Loom Cleaner**



Provides automatic, continuous cleaning of looms and ceiling • Drastically cuts cleaning costs • Steps up production • Improves quality of fabric • Reduces fire hazard • Improves weave room appearance • Boosts employee morale • Can be incorporated with beam handling equipment.

Write for further information, or ask to have an Amco engineer call.



Swiftly whirling outlet nozzles, driven by the air stream, direct the air jets at an acute angle in overlapping, circular paths. The result is a rapid series of high-velocity bursts of air over loom and warp surfaces for complete cleaning action.

AMERICAN MOISTENING COMPANY *Air Conditioning Systems and Textile Mill Equipment*

Executive Offices: Cleveland, N. C. Branches in Atlanta, Boston, Camden, Providence, Toronto



GENACRYL[®] DYES FOR ORLON^{*}

FOR RICH, FULL SHADES ECONOMICALLY PRODUCED

Sweaters are a necessity in the wardrobes of the younger set. The more colorful, the better. With GDC's Genacryl[®] dyes, you can match the popular shades shown here or create trend-setting new ones on Orlon, other acrylics, and wool-acrylic mixtures.

Water-soluble Genacryl dyes, a new form of the basic type, are applied directly to the fabric in the presence of acetic acid without numerous complex procedures. Their high tinctorial strength makes possible economical production of bright, full shades that are level and well penetrated. These colors have very good fastness to light, dry-cleaning, perspiration, rubbing and washing.

Write or call our nearest sales office for further information about color-matching formulations and application methods.

^{*}Acrylic fiber of E. I. du Pont de Nemours & Co. (Inc.)

From Research to Reality



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A SALES DIVISION OF

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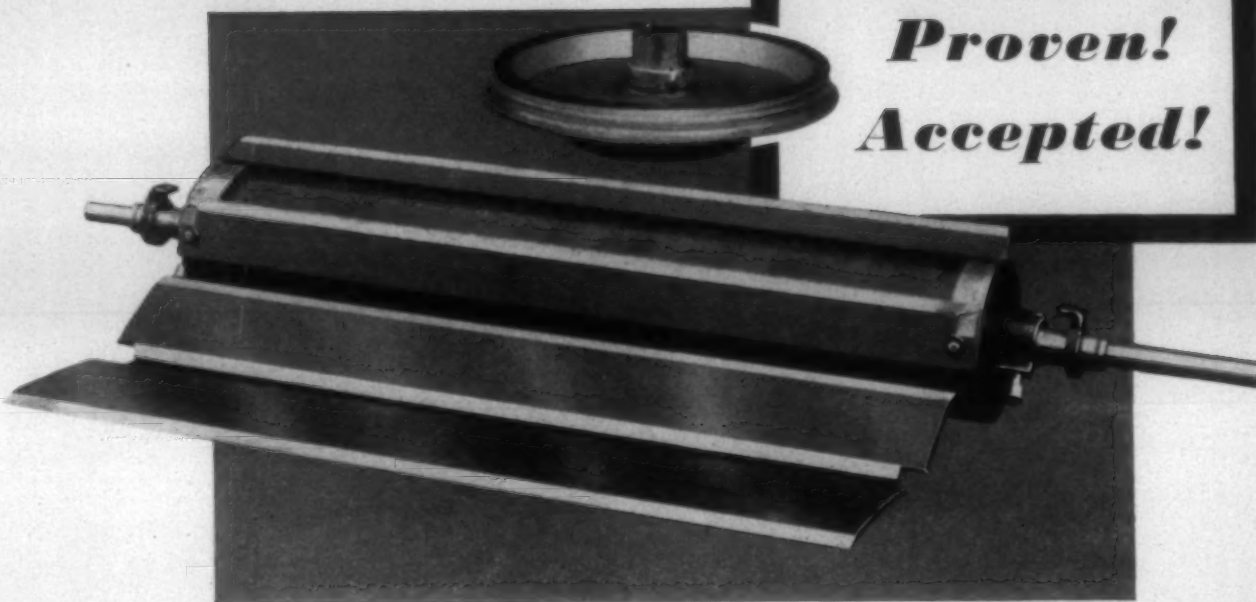
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Proven!
Accepted!***



THE GOSSETT IMPROVED CARD FANCY

Eliminates Lumps and Flakes When Carding Synthetics

It is precision built machined to your specifications and tolerances by GOSSETT technicians. The extra long spring steel wire fillets are guaranteed to fluff all synthetic fibers from the card cylinders thus enabling the doffer to pick them off evenly. Further, the GOSSETT Card Fancy fluffs the synthetic fibers so well that the doffer will pull off and make as good a sliver as you have ever seen.

When you install the improved GOSSETT Card Fancy there will be no more excess loading on the cylinder. Write at once for full particulars and estimated cost.

For full information and prices, write

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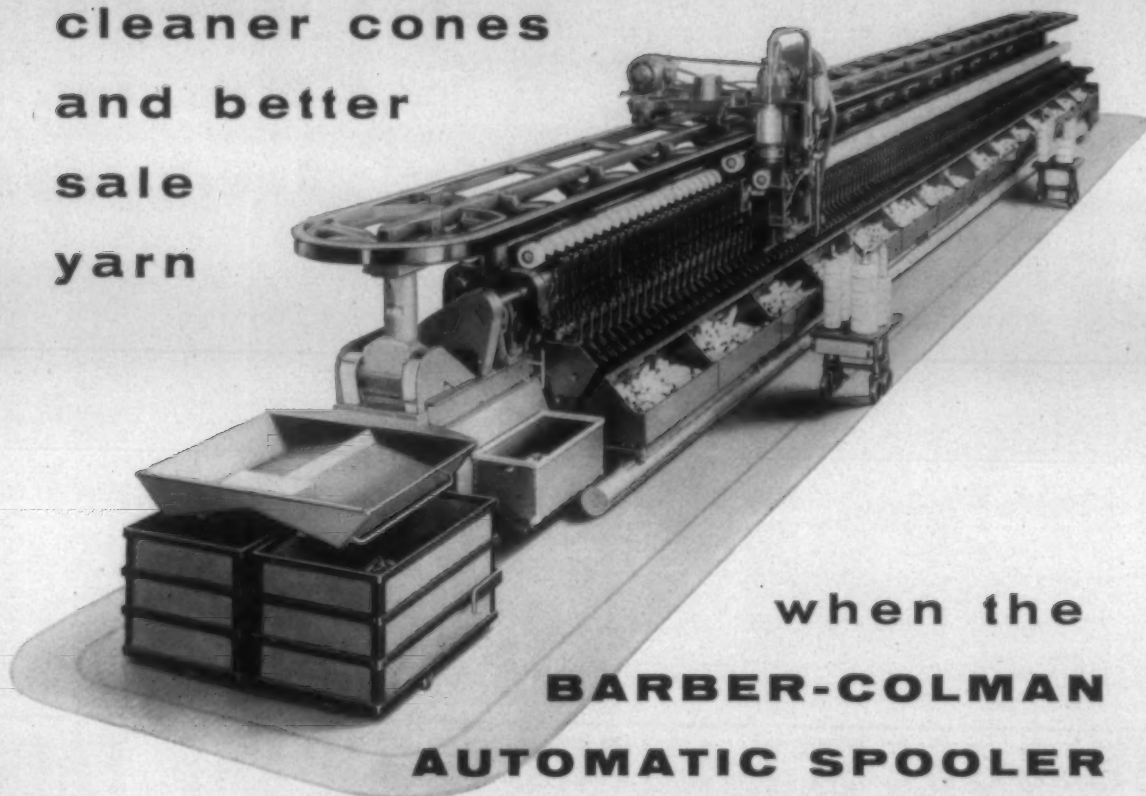
D. W. SMITH
N. C.-Va. Representative

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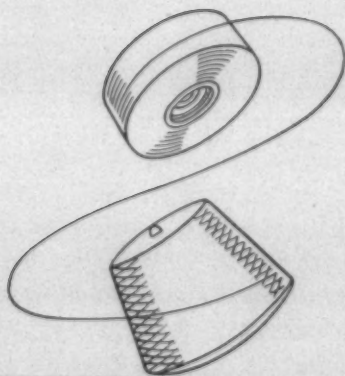
Machine Works, Inc.

GASTONIA, NORTH CAROLINA

**cleaner cones
and better
sale
yarn**



**when the
BARBER-COLMAN
AUTOMATIC SPOOLER
is used to make cheeses first**



The introduction of Barber-Colman AUTOMATIC SPOOLING onto cheeses between the spinning and coning can actually make **BETTER SALE YARN** at **LOWER COST!**

There are two main reasons for such results. First, the Automatic Spooler has reliable cleaning devices that automatically catch and remove such imperfections as slubs, gouts, wild yarn, and other irregularities. All knots are mechanically-tied, uniform, small, true Weaver's Knots. Second, on the winder, the package, wound from the cheese rather than from bobbins, is

completely filled without stopping, thus producing a uniform cone with no straight winds. By eliminating stops, machine and labor costs are substantially reduced.

Cheeses from the Automatic Spooler also can be put on doubling or twisting frames or, when wound on stainless cores, can go direct to the dyeing. Many prominent Sale Yarn Mills are now using Barber-Colman Automatic Spoolers for just these reasons. *If you want to see who these mills are, write us for a copy of our Sale Yarn Mill List.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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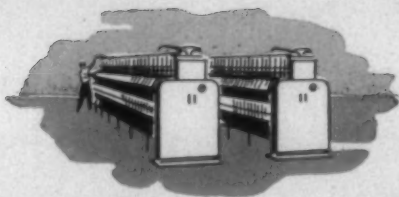
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*"They had trouble
with oil on
thread and floor..."*

A large Eastern nylon thread mill had a problem in the lubrication of the vertical guides on their nylon thread winders. Because of the close tolerance between the guide shaft and the traveler, a light oil had to be used. However, the light oil they were using was being wiped off and was dropping on thread and floor.

On one of his routine visits, Sinclair Representative W. E. Suydam was asked for his solution of this problem. Mr. Suydam reports:

"Basing my recommendation on previous experience with problems of this sort, I recommended Sinclair NO-DRIP Oil Light because of its adhesive and cohesive properties. The results amazed the maintenance staff. There was no oil leakage and, instead of four applications per day, only one was necessary.

"Needless to say, the mill changed to NO-DRIP — in fact, they now use Sinclair products exclusively."

To solve your textile lubrication problems, get the benefit of a Sinclair Representative's recommendation. Call your local Sinclair office or write to Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y.
There's no obligation.

SINCLAIR

NO-DRIP TEXTILE LUBRICANTS

PICTURE OF STRENGTH...



Original Denman PIONEER LOOM PARTS



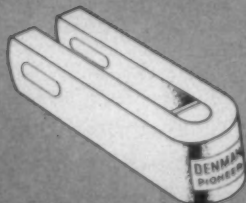
DENMAN PIONEER
HOLD-UP STRAPS



DENMAN PIONEER
SWEEPSTICK



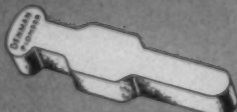
DENMAN PIONEER
SPINDLE ROD BUMPER



DENMAN PIONEER
LUG STRAP



DENMAN PIONEER
BOBBIN STRIPPER BLADE



DENMAN PIONEER
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PROTECT expensive loom parts!
ABSORB high-speed loom shocks!

INCREASE loom efficiency!
LONGER "prime of life"!

Original Denman Pioneer Loom Parts are engineered and moulded for one purpose only . . . to give greater efficiency, longer life, smoother performance in all your loom operations. All are compounded of only the very finest materials to withstand wear, produce the exact amount of resilience necessary to absorb shock and vibration with minimum wear and tear on the loom. To cut costs, increase production, protect expensive looms . . . SPECIFY ORIGINAL DENMAN PIONEER LOOM PARTS!

Ask The DENMAN Sales Agent Nearest You . . .

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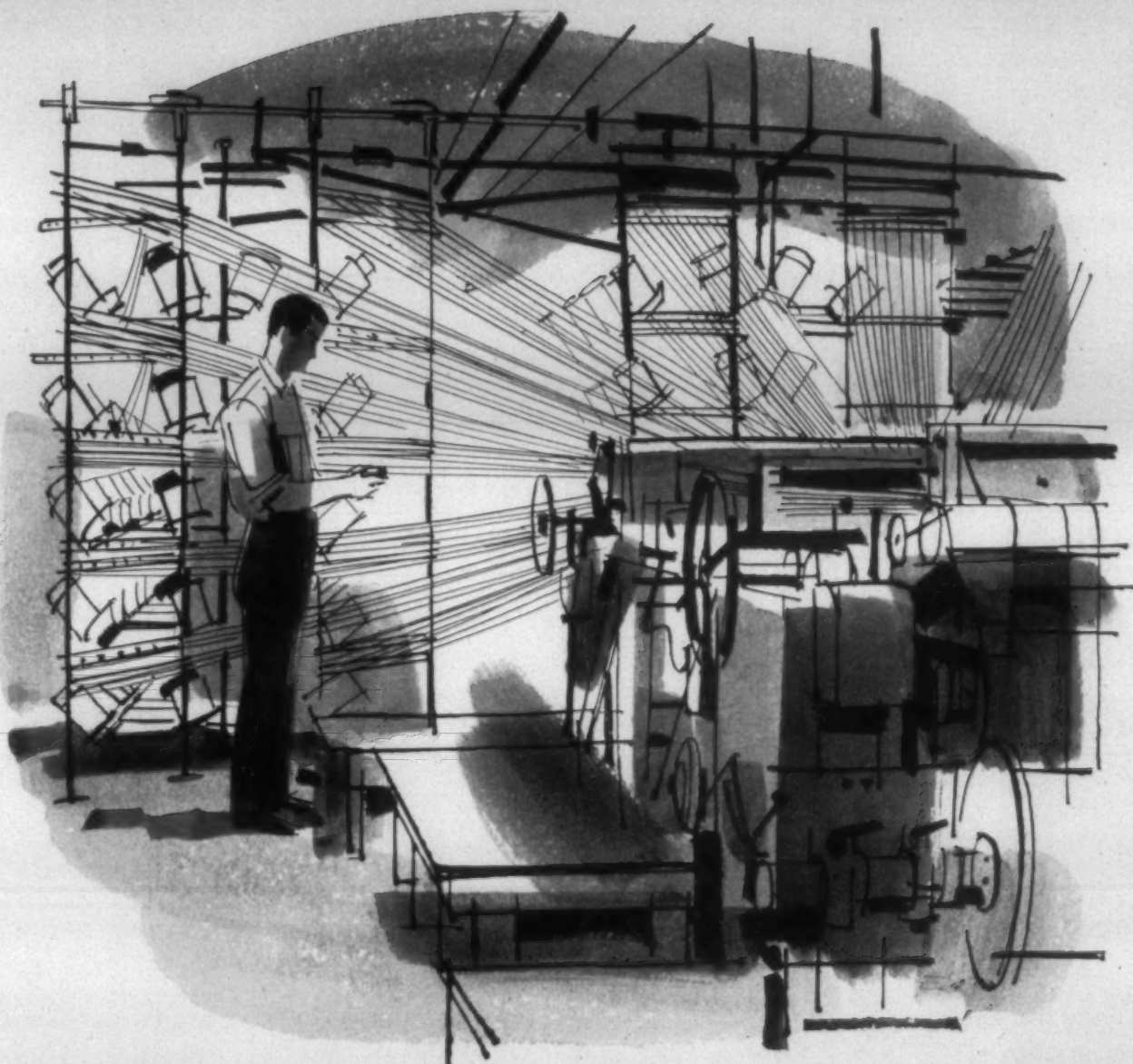
R. D. HUGHES COMPANY 9425 Garland Road, Dallas, Texas

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Nowhere in the textile industry can your mill problems be solved more realistically and effectively than in American Viscose Corporation's TRD*. This is a priceless plus you get with Avisco® fibers or yarns, and you pay no more for it.

*Here in our Textile Research Department we use actual mill machinery under mill operating conditions. With such complete facilities, we can start with the fiber, open it, card it, spin it, weave it, dye and finish it. Or starting with the yarn, we can beam it or twist it, weave it or knit it, dye it and finish it. What works here will work in your mill, too.



This assistance is as near as your phone. Call LA 4-7200 or write American Viscose Corp., 350 Fifth Ave., New York 1, N. Y.



Penford Gums *

The Preferred Warp Sizing for All Fibers

For Fine Combed Yarns

- increase abrasion resistance
- eliminate hard size and roll marks on warps
- give more uniform size distribution

For Spun Rayon (Viscose)

- give excellent weaving protection
- minimize set marks, knees and imperfections
- possess easy desizing characteristics

For Hydrophobic Fibers (Nylon, Dacron, Acrilan, Orlon, Dynel & Blends)

- are compatible with adjuncts facilitating necessary adhesion for good weaving
- reduce clinging and protruding fibers
- produce tough but flexible films

For Worsted Fibers

- provide excellent weaving protection
- bend protruding fibers to yarn body
- do not congeal at low size box operating temperatures

Individual size formulations depend on many variables and Penick & Ford Technical Sales Service Engineers will at your request recommend formulations for individual mill requirements.

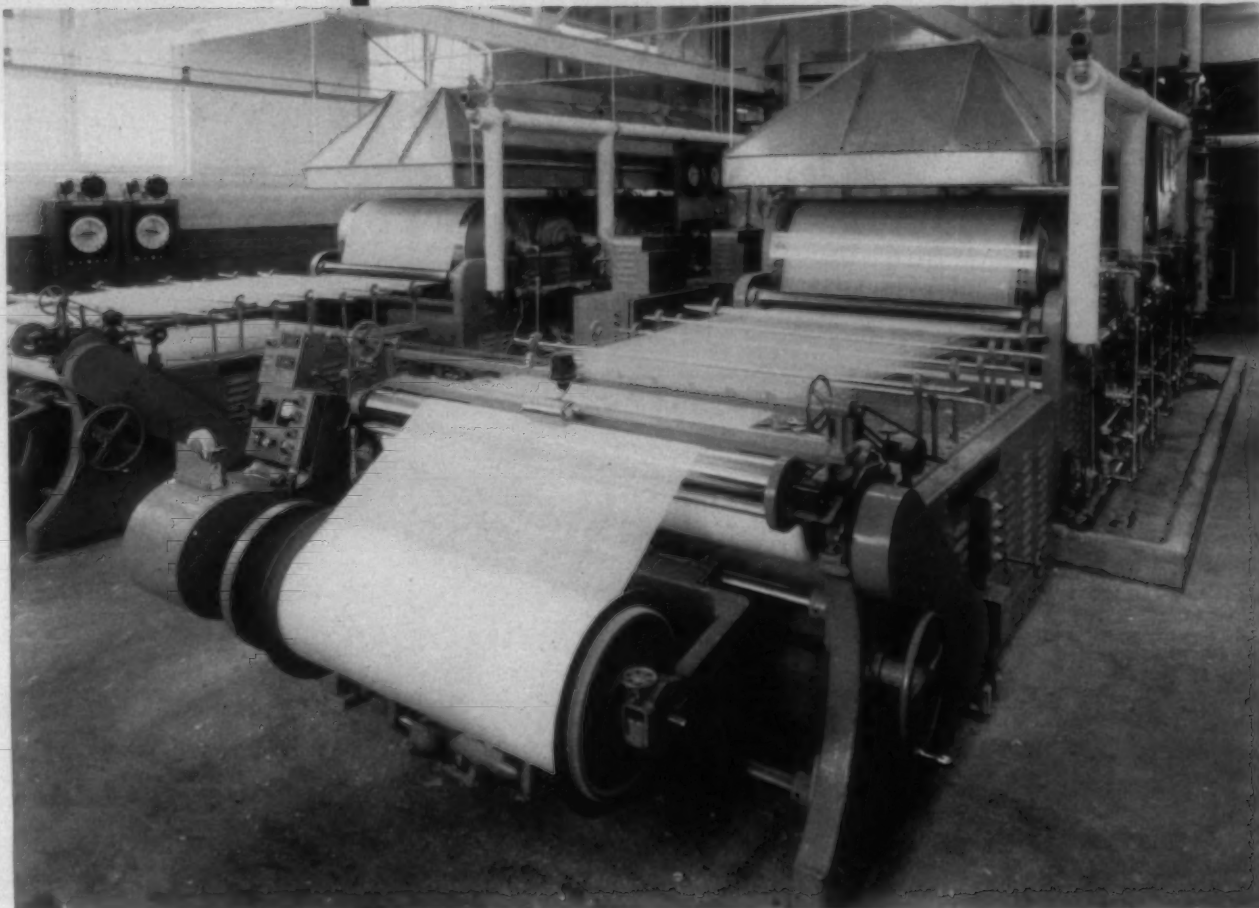
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MANUFACTURER OF DOUGLAS PEARL • CROWN THIN BOILING •
DOUGLAS DEXTRINES • CLEARSOL GUMS FOR THE TEXTILE INDUSTRY

* (U. S. PATENT NOS. 2,516,632; 2,516,633; 2,516,634)

New installation at Glenwood Mills, Easley, S. C.
(Division of Mayfair Mills, Arcadia)



Another 100% Cocker Slasher Installation

With these two Cocker Slashers, Mayfair Mills joins the many other fine mills which rely 100% on Cocker Slashers. Perhaps the finest recommendation for Cocker Slashers and Service is the fact that one Cocker Slasher in a mill usually results in a complete Cocker installation.

Cocker Slashers have many outstanding advantages, such as complete and accurate push button controls over speed, tension, etc.—air operated rolls—full instrumentation—fast and simple beam doffing—and smooth operation at speeds up to 140 yards per minute. Mills report 20% to 25% more yarn on loom beams and production rates of over 1400 lbs. per hour.

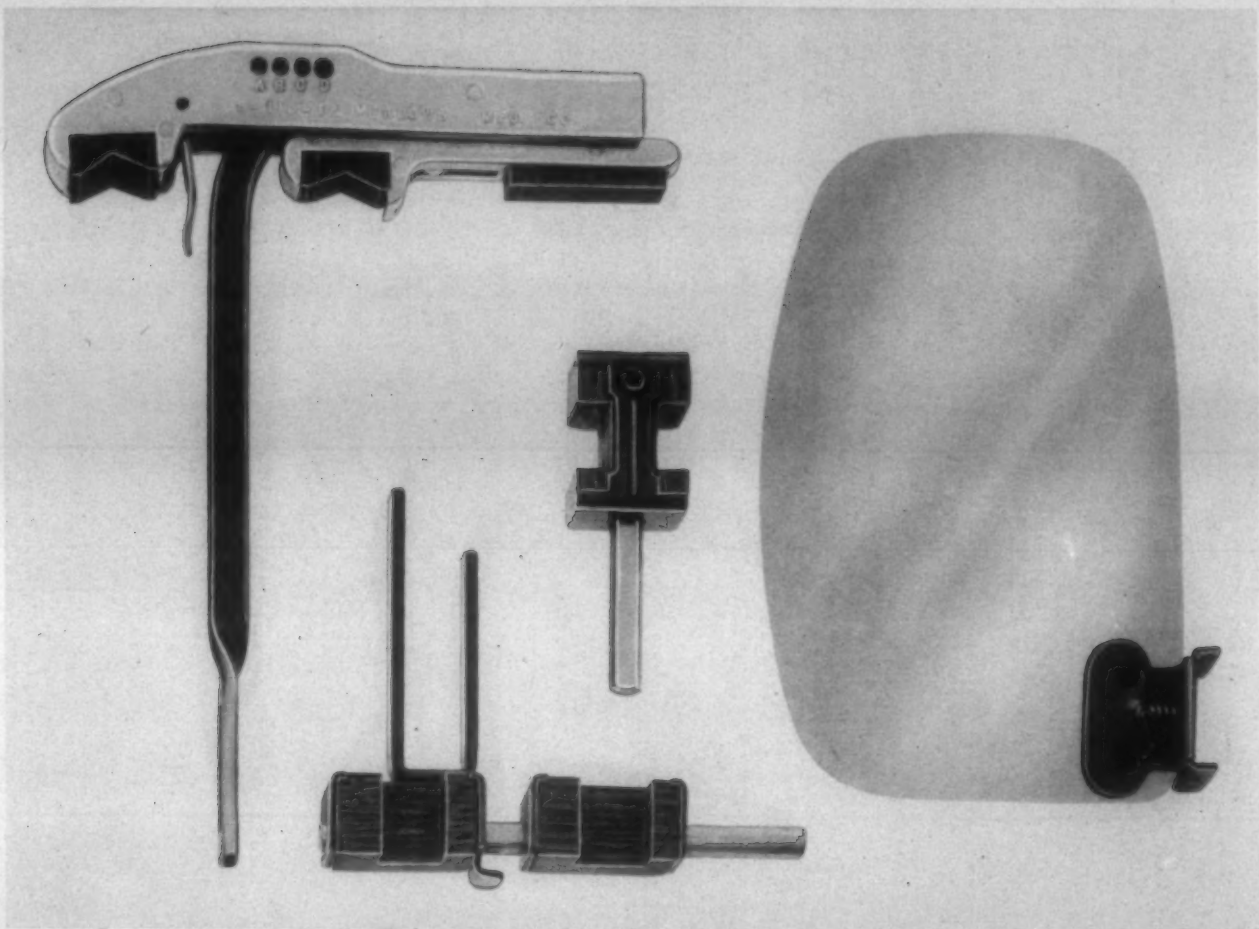
Cocker Slashers will handle all types of yarns. Built with 5 to 13 cylinders up to 144" in width. Call on Cocker for complete information or engineering service.

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Machine and Foundry Co., Gastonia, N. C.

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AMACID* and **CHROMAVEN*** Dyes

Two great dye groups worthy of your finest woolens and blends with Nylon and †Dacron. Available in a rainbow range of colors for all consumer shade demands. Excellent fastness to sunlight, perspiration, dry cleaning. Easy application by all wool-dyeing methods. Ideal for suitings, overcoatings, wool jersey dresses, upholstery yarns. For expert help with any wool-dyeing problem, write or call your A. A. P. representative at our nearest branch.

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For the Textile Industry's Use

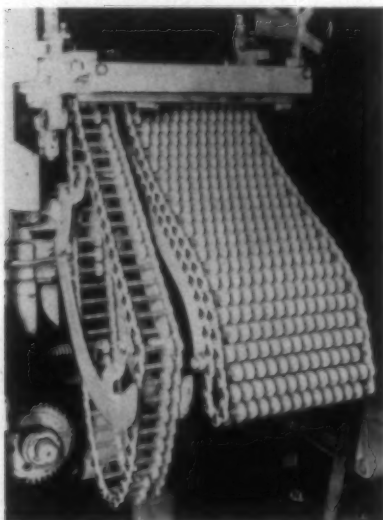
— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Tear Tester

Custom Scientific Instruments Inc. has announced the Visual Tear Tester Model CS-87. The unit allows the technician to observe under a microscope the tearing and drawing properties of yarns. It may be mounted on any microscope having a plain stage. The tester consists of 2 cam acting jaws mounted on ways driven by a reversible synchronous motor through a ball bearing lead screw. A scale is engraved on the unit to indicate jaw separation up to 8" in increments of 0.1". The jaws travel apart at rates of 0.112, 0.150, 0.300 and 0.800 in. per min. by means of change gears. The maximum tension is 50 lbs.

(Request Item No. G-1)

Nylon Pattern Chain



Pattern chain made of Du Pont nylon (H. F. Livermore Corp.)

A new development in loom parts, a nylon pattern chain developed by the H. F. Livermore Corp., is providing a solution to many problems encountered in the weave room. Made of Du Pont nylon, the links, sinkers and risers are molded by The General Tire & Rubber Co.'s Bolta Products Division. They are especially designed to meet the needs for increased production and improved quality. The use of nylon reduces the weight by about 66% as compared to steel, bronze, brass and other metals used previously. As a result, the loom requires less power and can function more efficiently, it is said.

One of the major advantages lies in the fact that lubrication of the entire chain is eliminated because nylon is self-lubricating. This results in a cleaner machine, time saved by the oiler, cleaner weave rooms

and less likelihood of getting dirt and grease on the cloth. The nylon material maintains dimensional stability of all component parts of the chain, reducing wear to a minimum. This, in turn, is said to reduce downtime formerly caused by pattern chain failure. Another important feature of the nylon pattern chain is that it permits the use of colored risers. This not only simplifies setting up the pattern but also enables the weaver to spot errors in the design with greater ease. It also makes it easier to train weavers as complicated patterns can be learned in minimum time with the colored risers, it is said.

(Request Item No. G-2)

Skein Dyeing Machine

A new, high temperature and high pressure skein dyeing machine, made by Scholl Ltd. of Switzerland, is being introduced in the U. S. by Cosa Corp. Especially adapted for high temperatures up to 230°F, this skein dryer can be used for dyeing wool and all synthetic materials. It is said to provide good results with high bulk orlon since it uses the double stick method which controls the amount of bulking. No stick marks, channeling or wrinkling can occur in the yarn, the company reports.

The advanced design of the skein dyer permits both high temperatures and high pressures and full penetration of the dye liquor into the yarn. As a result color impregnation is completely uniform. This design also includes a special pump which assures uniform dye liquor circulation at all points in the machine. This action is said to prevent any variation among and between the skeins. The top of the yarn carrier in the machine acts as a cover and facilitates the handling of the material.

The Scholl skein dyer is available with capacities of 25, 55, 125 and 250-lb. dye lots. In the 250-lb. machine the material carrier separates the tank into 2 compartments of 125 lbs. each. This guarantees even flow of the liquor. Two or more machines can be coupled together for dyeing to the same shade. The machine is built entirely of Type 316 stainless steel. Compact in construction and new in design this machine is said to not only shorten the dyeing process but also to provide complete protection for the material.

(Request Item No. G-3)

Marking Pen

A newly-designed textile marking pen, the Perma-Pen, has been announced by the Mark-Tex Corp. The pen is available with a variety of colors of ink and has been made especially for the permanent identification of all fabrics—synthetic and natural. It con-

sists of a non-collapsible, non-breakable, leakproof tube equipped with its own marking point. The pen is said to contain enough ink to mark 10,000 characters 1" high with bright, legible, permanent marks. The fast drying ink resists dyeing, finishing, bleaching, fulling, scouring, boil off and all other textile processes.

(Request Item No. G-4)

Electric Fork Truck



The Model FT-20 electric fork truck (Baker-Raulang Co.)

A highly-maneuverable electric fork truck with 2,000-lb. capacity has been added to its line by the Baker-Raulang Co. The Model FT-20 has an over-all length, without forks, of 66½", and a turning radius of only 68". Minimum intersecting aisle is 60". Maximum travel speed with load is 5.2 m.p.h. Forward or backward tilt of 10° makes the FT-20 especially useful for loading side-loaded pallet body trucks.

Features of the FT-20 include self-adjusting hydraulic brakes, plus an independent seat-operated parking brake. Dynamic braking is also provided and the control prevents abrupt reversal of direction when traveling at high speed. Steering is automotive-type. Absence of cowl improves visibility and makes it easier for the operator to mount and dismount. Inching control is standard. Standard lift height is 130". Other specifications include: Over-all height, 83"; over-all width, 33¼"; maximum lift speed (loaded), 42 f.p.m.; free lift (dual cyl.), 65¾".

(Request Item No. G-5)

Vinyl Copolymer

A completely new type of emulsion, Flexbond 100—a copolymer of vinyl acetate and vinyl stearate—has been made available to industry by the Colton Chemical Co., a division of Air Reduction Co. Inc. Film properties of Flexbond 100 include unusually high water resistance, fine particle size, clear, transparent film, permanent flexibility, excellent adhesion, non-toxicity and

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MILLION SPINDLES
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ROBERTS COMPANY
SANFORD,
NORTH CAROLINA

VOL. 12

SANFORD, NORTH CAROLINA

NO. 3

ALL THREE LINES IN TOP ROLL SUSPENSION USE BALL BEARINGS

The Roberts Ball Bearing Top Roll Suspension System uses double-row ball bearings in front, middle and back lines and incorporates many other important design advantages.

Cots have ½" hole diameter, revolve together making lap removal simpler, and are buffed on standard equipment, without attachments. Full length revolving clearers are used.

Front and back rolls are interchangeable making sequence buffing possible.

The double-row bearing raceways are ground directly into ½" shafts. Bearings are grease-packed for life and a 2-piece labyrinth seal protects them from lint entrance and from roll picker damage.

The system has controlled self-alignment. Conventional deadweighting or new spring weighting is optional.

An alternate arrangement also available employs a ball bearing top roll and special suspension on the front line only with Roberts Cap Bars and solid top rolls on middle and back top rolls.

Roberts also continues to offer its No-Oil Cap Bar and Saddle system for all three lines, now installed in more than 2½ million spindles.

SPINNING MODERNIZATION AT LOWEST COST

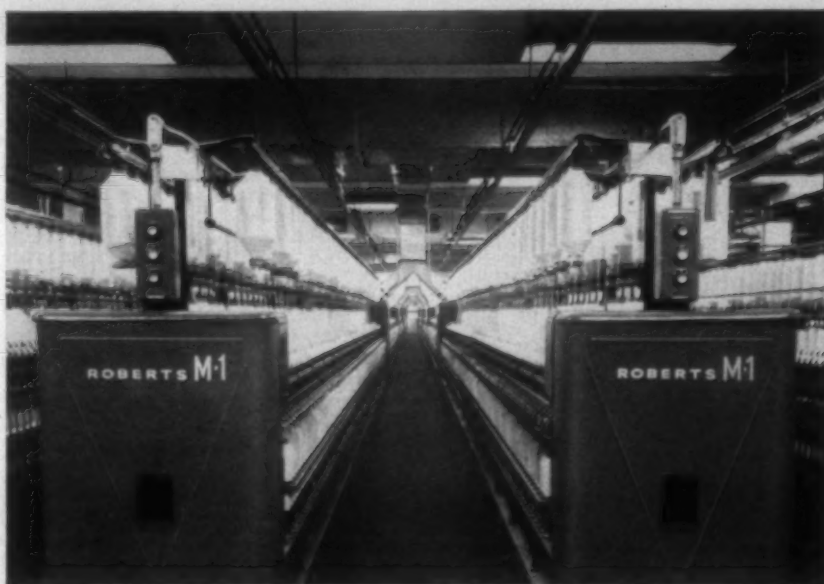
The cost-cutting, performance, and quality features of Roberts Spinning can be obtained through changeovers to the mills' existing spinning frames, or through rebuilt frames supplied by Roberts, as well as Roberts M-1 Spinning Frames.

Changeovers can include drafting systems, spindles, creels, suction cleaning, tape drive, gearing, or any combination of these to provide the maximum return for minimum expenditures.

Roberts Model 55-R Rebuilt Frames provide complete new spinning performance making use only of non-functional support members of older frames, thus affecting a substantial saving.

Roberts M-1 Spinning Frames are excitingly new from the ground up, with all-ball-bearing features. They are available in 39-inch, 36-inch, and the space-saving 25-inch widths.

ROBERTS SPINNING FRAMES SET TODAY'S STANDARD FOR PRODUCTION, YARN QUALITY AND INVESTMENT



Roberts Spinning is setting today's standard for comparison in high drafts, package sizes, roving bobbin sizes, front roll speeds, ends up, yarn break factor — and at the lowest investment cost per spindle.

The Roberts M-1 Spinning Frame is simple and straightforward, free from radical innovations or gadgets. Its design has already been tried and proven in many successful applications. It embodies all the ball bearing features most wanted in a modern frame, giving highest production and lowest maintenance.

Roberts Double-Apron Drafting produces highest break factors, best yarn evenness and lowest ends down in a range of drafts from 10 to 60, for yarn numbers from 2's to 100's, in cotton, synthetics with staples up to 3 inches long, or blends.

Large package flexibility is an important feature. One basic model of the Roberts M-1 Spinning Frame is adapted to run warp bobbins with lengths from 10 inches to 12 inches

as well as filling quills. Standard gauges from 3 inches to 4½ inches can be arranged to employ the maximum desirable ring size suitable for the yarn number and twist constant.

The frame chassis is of rugged construction. The working motions use ball bearings for every turning and oscillating motion where practical. The all-ball-bearing head design is outstanding in its simplicity and flexibility.

All gears in the head are hardened and have one pitch, one width, one bore and one keyway, making them completely interchangeable. Greased-for-life bearings are used in the head and all plain bearings and studs are eliminated. Draft and lay constants are adjusted simply over the complete range of yarn numbers.

Standard equipment includes Roberts Ball Bearing Spindles, Roberts built-in UnitVac Suction Cleaning. Roberts AeroCreels are available in every desired package size, single or double.

MODERN LUBRICANTS FOR MODERN MILLS

Quality lubricants are just as important to us as they are to you.

Fine lubricants cannot be measured in cost. Long life and service to lubricated parts is the ultimate end of a modern lubricant.

G-C Quality Textile Lubricants have found a place in many modern mills using the finest high speed equipment and have proven they will outlast normal lubricants from two to four times.

If you are interested in saving money and down time, we will be glad to make recommendations.

Our representative will be glad to work with you — no obligation, of course.

Write, wire or phone

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FOR THE TEXTILE INDUSTRY'S USE—

greaseproofness. The clear, transparent film is especially suitable for fabrics where either slight or extreme flexibility is desirable.

(Request Item No. G-6)

Wetting Agent

Proctor Chemical Co. Inc. has announced the release of Protowet XL, a surface active agent of the sulfated fatty acid ester type. The product is said to be of particular interest in practically every phase of textile wetting process where wetting and/or re-wetting is a problem. It is stated by the manufacturer that the dyeing of heavy tightly woven fabrics would be improved greatly by pre-treating the goods with Protowet XL which enables the dye to strike to the core of the fibers. When used as a re-wetting agent for goods to be pre-shrunk, good softness and lubrication can be obtained in addition to uniform shrinking. It is also said that Protowet XL is of interest as a penetrant in warp sizing, as a kier bleaching assistant and as an absorbent finish for toweling.

(Request Item No. G-7)

Weather Duty Mercury Lamps

Westinghouse Electric Corp. has announced that in the future all Westinghouse 400, 700 and 1,000-watt mercury vapor lamps will be made exclusively with the improved Weather Duty weatherproof outer glass bulb. According to the company, the move is being made to assure maximum performance and light output under all operating conditions. The dangers of cracks due to moisture are said to be eliminated with the Weather Duty lamps as is the loss of light which occurs due to deterioration of the old-type soft glass bulb when exposed to the atmosphere. Weather Duty mercury and fluorescent mercury lamps are recommended for heavy duty service both indoors and out. (Request Item No. G-8)

Softener & Lubricant

Processing agents developed by Arnold, Hoffman & Co. of interest to processors of synthetic textiles include a nylon warp size, an anionic lubricant emulsion, and a new and cationic softener. Ahcovel X57 is the company's universal textile softener. It performs on nearly every textile fiber and is of merit in both pure and resin finishes. On the hydrophobic fibers the softener shows anti-static properties. Whether used alone or as a plasticizer for resin finishes, it reportedly does not contribute to loss in tensile strength nor does it decrease tear strength or lower crease resistance. It will not cause odor to be formed on the fibers, is highly resistant to scorching and yellowing, and will not contribute to chlorine-retention damage. Its desirable characteristics are said to be ease of solubility in warm water, high degree of substantivity, low foaming properties, compatibility with most resin catalysts, and excellent softening for all synthetic

and natural fibers. Ahcovel X57 is available in a readily soluble fluid paste and a soft wax concentrate.

Ahco nylon warp size is said to be a balanced blend of binders and waxes, compounded to provide a non-corrosive lubricant and size for nylon and Dacron yarns intended for marquisette constructions. Reportedly, it will not shed or build up during weaving operations. Loose or broken filaments are laid down so that they cannot snag or peel during passage through combs or reeds. Yarns are sufficiently lubricated for proper static-free weaving.

Syntharol ND is an anionic emulsion of liquid wax. It has been formulated and homogenized to insure stability and its purpose is to facilitate processing operations by imparting lubrication and softness to natural and synthetic yarns. The specially selected lower melting point wax it contains offers the benefits which are derived from increased film continuity.

(Request Item No. G-9)

Fiber Testing Instrument



Operator prepares to insert sample into the optical system of E.F.F.I. The instrument will measure the diameters of 1,000 fibers in five minutes, it is said. (National Research Corp.)

Fiber Research Corp. announces the introduction of a new system for the measurement and grading of textile fibers. The machine, designated E.F.F.I. (Electronic Fiber Fineness Indicator), is a desk size unit which rapidly scans the diameters of fibers contained on a simple slide and computes the average diameter of the sample and the percentage of fibers whose diameters are within selected distribution groups. Operation is automatic and answers appear on direct reading counters. Results are rapid, accurate and independent of human judgment. An accurate 1,000 fiber determination can be made in about 5 minutes.

The instrument has been designed so that it can be operated by a semi-skilled technician. For example, an operator with only 1 week of training can prepare a slide in about 5 minutes. The slide is inserted and the machine completes the analysis automatically before another slide can be prepared. E.F.F.I. will accurately measure the diameters of all wool fibers normally used in apparel. The range includes fibers with diameters from less than 10 to more

than 40 microns with a median of about 25 microns. In terms of grades, the range includes 80s through 36s.

In determining the average diameter of fibers, the working accuracy of E.F.F.I. closely approaches the theoretical, statistical limit arising from measuring a finite sample of 1,000 fibers. For a 62s grade, for example, this limit (standard error of the mean) is typically 0.17 micron. During extensive tests when measuring a standard sample of 62s provided by the U.S.D.A., the machine produced readings with a standard error of 0.2 micron. Measurements on a single slide can be repeated within a variation of about 0.1 micron. A quick double check can be made by simply reversing the slide. Some 1,000 additional fibers will be measured in less than 3 minutes.

To make a fiber determination, a group of several thousand fibers is cut (from wool top sliver) to a length of about 200 microns. These cuttings are laid parallel on a microscope slide which is inserted in the optical system of the E.F.F.I. fiber grader. The operator presses a button to start the machine and from this point on all operation is automatic and the operator is free to prepare the next slide. In the optical system the slide passes through a beam of light. After each pass the slide is mechanically indexed forward a short distance to bring new fibers into the beam and is passed through again. This slide motion is repeated until a count of 1,000 has been completed. The machine stops automatically.

The image cast by each fiber as it passes through the light beam is magnified and presented to a photomultiplier tube which produces an electrical output signal as soon as the leading edge of the fiber is seen by the photo tube. The output signal from the tube continues until the trailing edge of the fiber has passed; the duration of the signal is a measure of the diameter of that particular fiber. The signal from the photomultiplier tube is passed to a counting circuit. An averaging circuit remembers the interval of time each fiber is in the light beam so that when the one-thousandth fiber has passed the slit, a direct measure is available of the average of the 1,000 diameters.

Counter tubes are used to indicate the diameter group distribution of the 1,000 fibers counted. The machine is set to indicate the groups designated by the U.S.D.A. as standards for wool fiber fineness.

(Request Item No. G-10)

Hydraulic Lubricator

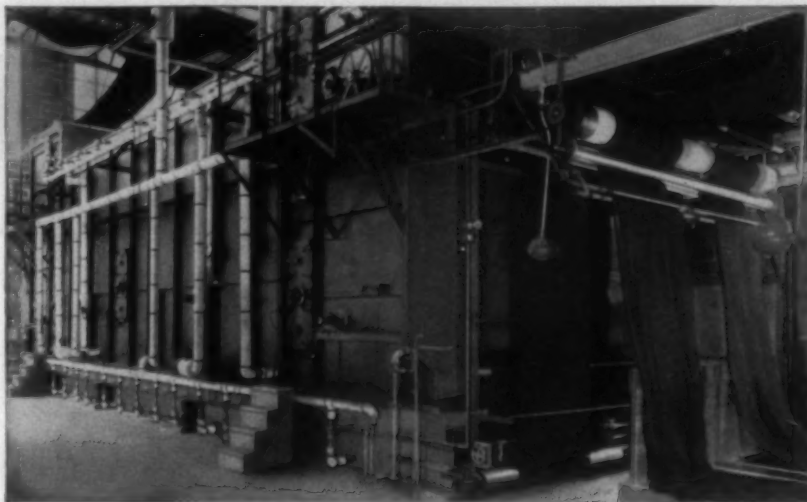
A new hydraulic lubricator for use in applications where desired lubricant discharge per machine cycle is relatively small is now available from the Bijur Lubricating Corp. Designated Cyclic Y, the lubricator will operate on any hydraulic line pressure from 500 p.s.i. to 3,000 p.s.i. and will deliver 2 c.c. of oil per lubricating cycle. By resetting the hydraulic piston stroke adjustment, any 1 of 7 different lubrication cycles can be obtained. Reservoir capacity is 6 pts.

In operation, hydraulic pressure drives a

Here is an immediate opportunity
for **PROFIT**

the Proctor & Schwartz Loop Ager for printed fabrics

- PAYS FOR ITSELF IN ONE YEAR
- REPLACES 5 ROLLER AGERS
- REQUIRES ONLY 2 MEN PER SHIFT
- VIRTUALLY ELIMINATES AGEING "SECONDS"



The Proctor & Schwartz Loop Ager has been proven to pay for itself quickly—often yielding profits equal to original investment in a single year. Completely outmoding existing units, this advanced system for ageing vat dyed print goods does the work of five roller agers, cuts floor space needed in half, and eliminates ageing re-runs. One installation saved \$45,000 per year in direct labor alone, with savings in dyestuffs, glycerine and steam exceeding this amount. Standard sizes range from 2 to 7 units—supplying outputs from 27,000 to 95,000 yards per shift. Proctor engineers will be glad to make recommendations for the exact equipment to meet your particular production requirements. Write for information.

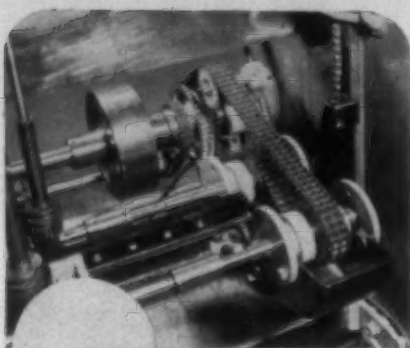
PROCTOR & SCHWARTZ equipment for the textile field

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| Automatic Blending Systems | Loop Agers For Print Goods |
| Weighing Feeds | Tenter Housings |
| Pickers | Open-Width Bleach Systems For Woven Fabrics |
| Shredders | Multipass Airway Dryers |
| Bale Breakers | Nylon Setting Equipment |
| Synthetic Cards | Con-O-Matic Washers |
| Garnetts | Continuous Bleach Systems For Producing Tubular Knits |
| Dryers For Fibrous Material | Equipment For "Redmanized"® Shrunken-To-Fit Fabrics |
| Yarn Dryers | Carpet Dryers |
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Every gear, sleeve, and bearing rotates in the same direction as the jack shaft. Positive one-way power transmission starts or stops bobbins and spindles simultaneously.

- **Ends Stay Put** regardless of starting or stopping speeds
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Completely sealed lubrication
- **The Result**

The Precision Compound and Chain Drives produce bobbins of uniform size and weight with equal tension from the first to the last layer of yarn. The Precision Compound will save you many times its cost in producing better roving—and in fewer seconds and better running work in subsequent processes.

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FOR THE TEXTILE INDUSTRY'S USE—

piston connected to the ratchet arm. The hydraulic piston is returned by a spring within the cylinder. The hydraulic piston settings determine the number of hydraulic strokes or machine cycles required for 1 lubricator cycle. A small hole is drilled through the hydraulic piston to bleed a small amount of oil on the pressure stroke, thereby cushioning the shock of operation at high pressures.

(Request Item No. G-11)

Super Rayflex Yarn

A new continuous filament rayon fiber with increased strength characteristics has been announced by American Viscose Corp. The new Super Rayflex-type yarn is available in 600 and 900 deniers. The yarn is said to be 40% stronger than regular Rayflex, having 4.5 grams per denier conditioned strength compared to 3.2 grams per denier. It is made primarily for industrial uses. (Request Item No. G-12)

Stapler

The Container Stapling Corp. has announced the Model BSA-Jumbo, air operated bottom stapler. This machine may be had as a combination of post and arm or with post only or with arm only. In addition to setting-up regular and end slotted containers, it is said that when the arm is attached that this machine can erect telescope boxes, staple jiffy and multi-wall bags, set-up flat pieces of interior packaging or staple flat pieces of board together. The stapler uses industrial size staples. (Request Item No. G-13)

Woonsocket Brushes

A new line of standard and special purpose brushes, featuring Plexiglas mounted nylon bristles designed especially for textile machine applications, has been introduced by the Woonsocket Brush Co. Offering superior performance and reduced maintenance requirements, the new brushes are available in standard designs for use in the upper and lower faller section, pressure roll, nip roll and coiler head mechanisms of Warner & Swasey pin drafter intersecting draw frames. This line of standard brushes is supplemented by 3 special purpose models, also intended for pin drafter applications.

The first is a coiler calender roll brush with spring tension holder, which not only gives added protection to the calender roll but also can be replaced in a fraction of the time required for similar brushes. Because the spring tension holder is permanently mounted on the machine's condenser plate, brush replacement cost is significantly reduced.

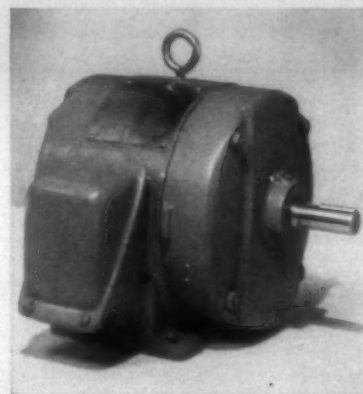
Also available is a new 2-sided top pressure roll brush. This unit, which offers a double set of bristles, can be flipped over when lint-laden to provide a completely new brushing surface without interfering with machine production. The net result is

said to be greatly improved cleaning action and a 2-fold increase in service life.

The third special purpose model is a new sectional under-clearer brush designed for insertion beneath the pin drafter's nip roll unit. The new under-clearer is said to give added cleaning action at the small nip roll and lower faller section. Since separate replaceable brush inserts now can be purchased for both the nip roll and fallers, considerable savings in replacement costs are reportedly attainable.

(Request Item No. G-14)

G. E. Non-Ventilated Motor



Tri-Clad 55 textile motor (General Electric Co.)

A new enclosed, non-ventilated textile motor, known as the Tri-Clad 55, that is said to be virtually maintenance-free, has been developed by the General Electric Co.'s small integral motor department. Designed for such applications as picking and carding machines, spinning and roving frames, spoolers, warpers and slashers, it is smaller and lighter than the screenless open types it replaces.

The new motor's stator insulation system is specifically designed for operation in the 75°C. rise temperature range. This is done to obtain maximum horsepower from the smallest practical frame size, according to the company. The enclosed, non-ventilated design minimizes fire hazards by preventing lint from coming into contact with the windings. Lint-cleaning is virtually eliminated it is said. The rugged cast-iron construction of the motor resists any physical damage.

Engineered to take advantage of new lubricants, the new motor uses the Tri-Clad 55 bearing system which seals dirt out and grease in. The company says that because of advances in insulating materials the life of the new line will equal the life of 55°C. rise motors. The new type motors are available in the following ratings: 2 and 3 horsepower, 1800 r.p.m.; 1½, 2 and 3 horsepower, 1200 r.p.m. The new textile line has standard N.E.M.A. torques.

(Request Item No. G-15)

Geigy Dyestuffs

A new yellowish-red dyestuff, Irgalan Red 4GL, with superior fastness to light, has been added to its Irgalan series of

neutral drawing, premetallized dyestuffs by Geigy Dyestuffs, Division of Geigy Chemical Corp. It is intended for dyeing wool, silk or nylon and is found useful in blends with cellulosic fibers. The new color completes the red portion of the spectrum in the Irgalan series of dyestuffs. It has very good fastness to perspiration and washing and high resistance to wet mill processing, according to the company. Like all the Irgalan dyestuffs, Irgalan Red 4GL is said to be economical because of the considerably shorter processing time required for application as compared to strong acid or chrome colors. At the same time, it reportedly produces extremely level, well penetrated shades.

Another new dyestuff, Cuprophenyl Blue 3GL, for cotton and viscose rayon that has good fastness to light, washing and perspiration when aftertreated with copper sulphate and acetic acid, is being offered by the company. This new coloring agent is adapted as a base for greenish blues or as a shading element with other Cuprophenyls. A wide variety of greens can be produced with combinations of Blue 3GL and Cuprophenyl Green 2BL or Cuprophenyl Yellow 3GL. This new material is said to draw slowly and level well. Hard water or presence of soda ash in the dye bath has little effect on shade or depth. Cuprophenyl Blue 3GL has a light fastness rating of 6-7 when aftertreated with copper and acetic acid, and is practically unaffected by TBL.

(Request Item No. G-16)

Gasketed Union

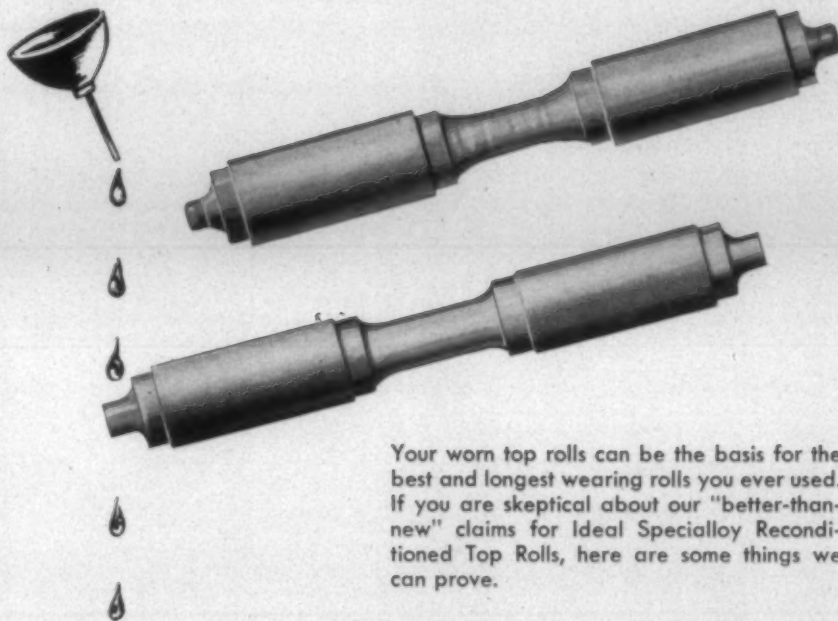
The Speedline Division of Horace T. Potts Co. has announced a new design of the Speedline union for use with light wall Schedules 5 and 10 stainless pipe which provides a serrated face for the gasket material of the user's choice. The gasket eliminates the leakage that so frequently occurs with ground joint stainless unions. Bi-metallic construction of stainless steel ferrules and a cadmium-plated carbon steel nut gives a union joint that can be made up and broken many times without the galling so typical of stainless threaded connections. These unions are available in 2 types—for expanding in sizes $\frac{1}{2}$ " through $1\frac{1}{2}$ " for welding or brazing in sizes $\frac{1}{2}$ " through 2".

(Request Item No. G-17)

Color Extender

Better color dispersion and intensity of color is obtained by blending the Glyco Products Co. Inc.'s Acrawax C Powdered with the commonly used pigments. About 10% Acrawax C Powdered, based on the weight of pigment, is used. In most cases the addition of Acrawax C Powdered permits the use of a smaller amount of pigment or dye without diminishing the intensity of the color of the finished product. In addition, it gives increased lubricity, mold-release and brighter finish in the molding and extrusion of polystyrene, polyethylene, polyvinyl chloride and other plastics and synthetic fibers. The color extender

Don't Junk Worn Top Rolls



Your worn top rolls can be the basis for the best and longest wearing rolls you ever used. If you are skeptical about our "better-than-new" claims for Ideal Specialloy Reconditioned Top Rolls, here are some things we can prove.

Ideal Specialloy surfaces have a cushioning action . . . tough—but oh so gentle . . . on saddles and cap bars.



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Case hardened steel surfaces reject oil. Require daily oiling. Ideal Specialloy porous surfaces absorb oil and hold from 2 to 4 weeks oil supply.



NO OIL SPOTS



The oil stays on the Specialloy bearing parts and off of the yarn. Oil seconds are practically eliminated.

Goes Weeks Without Attention



SPECIALLOY SAVES MONEY

Specialloy Reconditioning means longer life for top roll assemblies, less oiling labor, and sharply reduced seconds . . . a worthwhile net saving to you.

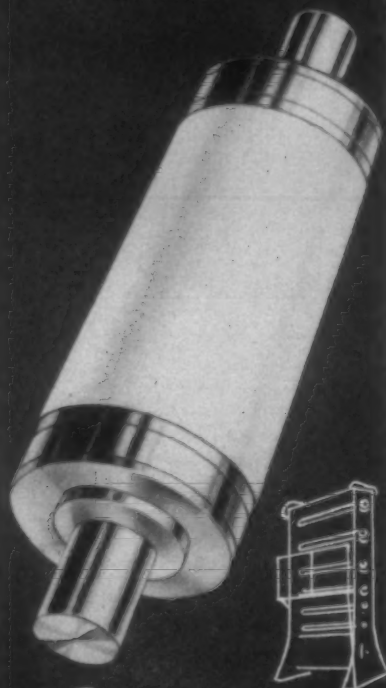
Don't junk your worn top rolls. Let us show you why Specialloy Reconditioning will give you the best top rolls obtainable. Let us recondition a half dozen of your worn rolls to prove our claims.

Ideal Machine Shops, Inc.

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Continuous Service to Textile Mills Since 1924

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FOR THE TEXTILE INDUSTRY'S USE—

is a white powder having a high melting point (284°-290°F) and a flash point of 810° F. It is also incorporated in coatings to give resistance to the salt-spray and solvents and mar-proof finishes.

(Request Item No. G-18)

Arkansas Co. Fixative

A new product, Culofix W F D, has recently been developed by the research laboratories of the Arkansas Co. Inc. This product is now being released to mills for use as an after-treatment to improve fastness of direct dyes to laundering. Culofix W F D has also been found of value when used in conjunction with Hydro-Pruf, the company's silicone water repellent and thermosetting resins, for improving color fastness in finishing. The use of this fixative does not adversely effect the water repellency rating produced by Hydro-Pruf on fabrics of all types.

(Request Item No. G-19)

Thermometer Series

The Wheelco Instruments Division of Barber-Colman Co. announces a new thermometer series. Included are recorders, recorder-controllers, indicators and indicator-controllers. Wheelco 4,000 series recorders and recorder-controllers use large 12" easy-to-read charts. Uniform accuracy over the entire scale is assured by the use of mercury-actuated sensing elements. These elements offer maximum stability over wide ranges of temperatures. It is said that finely built Bourdon coils, friction-free pen arms and Invar metallic compensation for the instrument cases, make the devices achieve smooth operation and dependable performance.

Recorder-controllers (single pen) are available in a variety of control forms and use plug-in type control chassis. Wheelco Thermotrol temperature indicators and indicator-controllers incorporate the construction features of the 4,000 series. The attractively designed indicator scale is approximately 7½" long with black screened figures and graduations on a white background. The set point and controlled variables are both indicated. Indicator-controllers use plug-in type chassis and are available in the same control forms as the round chart recorder-controllers. The new instruments are available either as surface or flush mounted units. The over-all dimensions are 16¾" x 14" x 8⅜". The temperature range of the series is from -40° to +950°.

(Request Item No. G-20)

Triple Lift Upright

A 3-section, telescoping fork truck upright that raises to permit ceiling-high stacking and retracts low enough to pass through boxcar doors has been announced by the industrial truck division of Clark Equipment Co. Described as the triple lift upright, the device is available in 4 standard sizes and at additional cost in 7 optional

sizes. In the smallest size the maximum fork height (the height to which a pallet can be raised) is 126". When the forks are lowered, the over-all height of the fork truck is only 65".

In the largest upright size, maximum fork height is 216" and over-all height with forks lowered is 96". The triple lift upright was designed particularly for installations where fork trucks must pass through low doors or areas with low overhead clearance and yet stack loads to considerable heights. Ordinary uprights designed for high stacking are too high to pass through low areas, and, conversely, uprights designed for low clearances do not have high-stacking ability. The upright is available on 3 models in Clark's new fork trucks—the C-30 (3,000 lbs. capacity), C-40 (4,000 lbs.), and C-50 (5,000 lbs.).

(Request Item No. G-21)

Pump Oiler



The No. 58 Eaglet pump oiler. (Eagle Mfg. Co.)

A brand new, inexpensive pump oiler with versatile uses and sturdy design has just been introduced by Eagle Mfg. Co. Called the No. 58 Eaglet, the new oiler is equipped with full hydraulic pump mechanism which delivers oil in a full stream or one drop at a time—depending on pressure applied to the finger lever. The oiler is copper-coated steel and holds 4 ounces of oil. It has a seamless-drawn body and a double-seamed bottom. It comes equipped with a 3" rigid spout. The spout is seamless high-grade steel tubing and comes equipped with a detachable brass cone-shaped grooved tip for easy oiling. The positive-acting hydraulic pump mechanism has no pump leathers or soldered connections to wear out.

(Request Item No. G-22)

Dye Carrier

The Tanatex Corp., manufacturer of chemicals for difficult processing operations, has announced the development of a new carrier to simplify the dyeing of synthetics. Called Carolid, this new carrier is said to make carrier dyeing no more difficult than ordinary dyeing.

Carolid is said to differ from most carriers in that it goes into true solution and from there is exhausted into the fabric. This factor reportedly eliminates the danger

of spotting and allows extremely level dyeings. Although the company developed Carolid to deal with specific problems of dyeing Dacron and its blends, the carrier has been found to be equally effective in simplifying the dyeing of Arnel, Darlan, Dynel, Verel, etc. It is reported to be non-toxic and gives outstanding color yields with simple dyeing procedures.

(Request Item No. G-23)

Carpet Staple

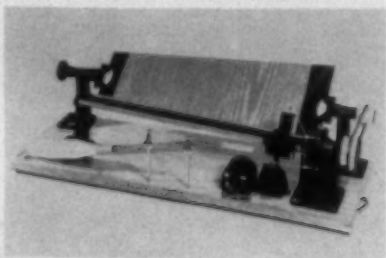
The Hartford Rayon Co. has added 2 new colors to its solution-dyed carpet rayon staple line and has extended its 8-denier program to 2 other colors previously manufactured only in 15 denier. The addition of Coco, in 8-denier bright and 15-denier dull fiber and of Sable in 15-denier bright brings to 15 the number of solution-dyed carpet rayon colors in production. In addition, Cafe Brown and Midnight Black also are available in 8-denier bright for the first time. (Request Item No. G-24)

Dye Fixing Agent

Metro-Atlantic Inc. has announced the development of Atcofix No. 90, a superior resin-based, cationic dye-fixing agent for direct colors. This product is said to be applied either by exhaustion or padding to produce a very marked increase in the over-all wet fastness of many direct colors. The dye-fixing agent is compatible with all of the commonly used thermosetting resins and it will produce excellent results when run in combination with resins. In addition to its dye-fixing properties, it is said to produce a moderately firm hand in most fabrics to which it is applied.

(Request Item No. G-25)

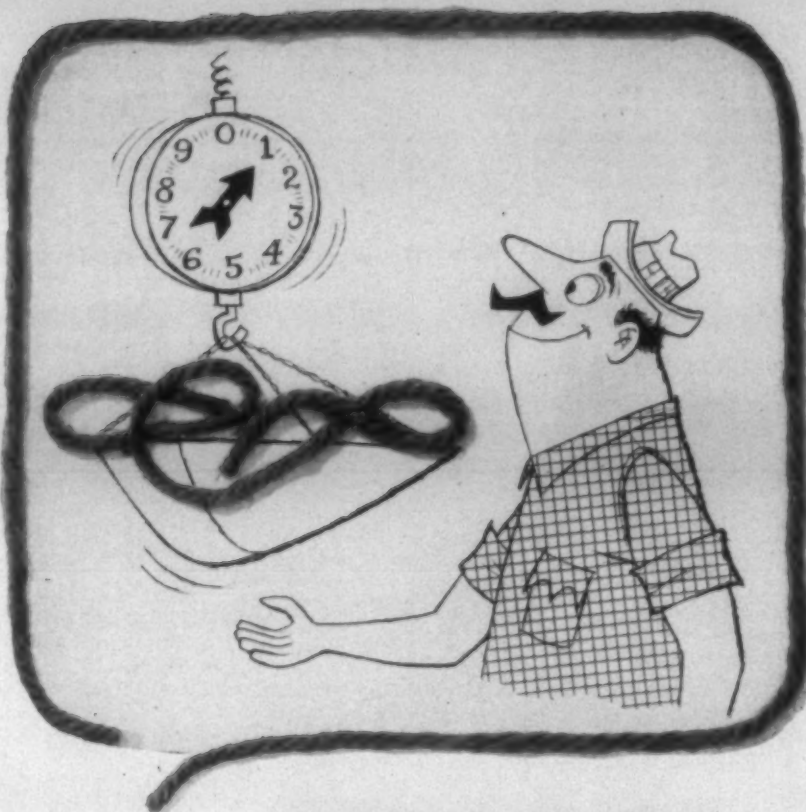
Yarn Inspection Machine



The Toenniessen yarn inspection machine (Watson & Desmond)

Watson & Desmond has recently introduced a new yarn inspection device. The Toenniessen inspection apparatus is designed principally for laboratory use. It consists of a driving mechanism which rotates a removable tapered black board at any desired speed and places a single strand of yarn on the board at any desired number of warps per inch. The device can be adjusted so that any pattern or defect in the yarn will show up vividly on the tapered board.

It is said to be possible to translate the repeat cycle of the yarn defect immediately to the machine where the defect was made



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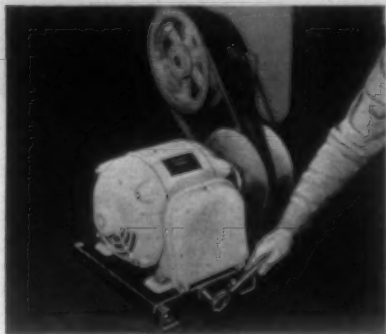


FOR THE TEXTILE INDUSTRY'S USE—

and even to a single part of that machine. The inspection machine is furnished with a set of 10 taper boards so that a series of studies can be conducted at the same time. An automatic stop-motion allows an operator to insert a board and start the machine in operation then turn his attention to other matters while the board runs full and stops automatically.

(Request Item No. G-26)

Adjustable Motor Base



Adjusto-Slide motor base (The American Pulley Co.)

Lost production due to stretched and sagging belts has been virtually eliminated by the American Pulley Co.'s Adjusto-Slide motor base. With this base, belt take-up is accomplished by adjusting only one screw. The adjustment is safely made without even stopping the motor.

Replacement of belts is simplified, it is said, because the adjusting screw on most models can be loosened and swung aside, freeing the top plate and the motor to move far enough for removing the old and installing the new belt. Once the new belt is on, the motor is moved back in place, the adjusting screw swung back, tightened and the machine is back in operation.

This motor base has many other important design features. Accurately die-formed top and bottom members slide free-

ly, yet always maintain perfect belt alignment. Motor base sizes and mounting hole spacing accommodate N.E.M.A. frame sizes from 182 through 326V in both old and new designations from 1 to 30 horsepower. The motor need never be loosened from the top plate, except for motor replacement. The Adjusto-Slide base can be mounted vertically, horizontally or in an inclined position. The adjustment screw is always readily accessible, is said to allow more take up adjustment than most bases and cannot rust or freeze.

(Request Item No. G-27)

Clark Fork Truck

A new battery-powered fork truck of 1,500 lbs. capacity weighing slightly over 4,000 lbs., with battery, is now available from the industrial truck division, Clark Equipment Co. Named the Electric Clipper 1524, the machine will travel 6.3 m.p.h. loaded, has a lift speed of 43 f.p.m. loaded and will climb a 10% grade. Minimum aisle for right-angle stacking is 71½" plus load length. A finger-tip lever on the steering column controls forward and reverse direction and automatically puts the machine into first point of power. The lever returns to neutral when the driver leaves his seat.

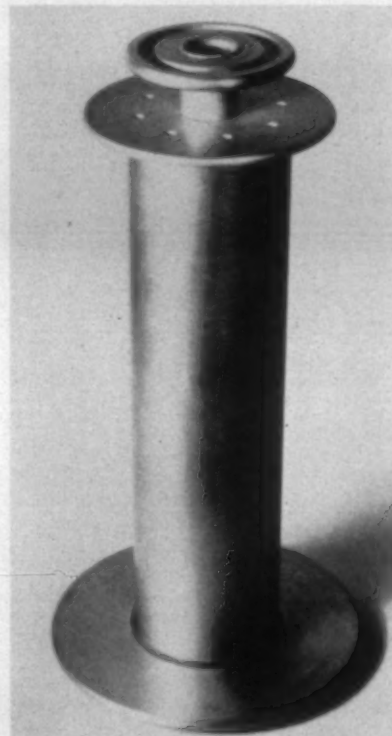
Fast, smooth acceleration is automatic. There is said to be no jerking even when the accelerator is depressed to the floorboard. A pivoted steer axle keeps wheels on the ground to prevent loss of traction when traveling over bumpy surfaces. Anti-kick-back tie rods are utilized to minimize road shocks. The box-type, welded frame is of rolled steel plate. Hydraulic pressure is maintained by a vane-type pump operated by its own completely enclosed motor. Double acting tile cylinders give the operator complete control of the upright in all positions.

Three independent braking systems are standard: regular hydraulic service brakes, reverse-torque braking accomplished by reversing the direction of travel and a parking brake which sets automatically when the driver leaves his seat. Removal of the key from the ignition switch opens the

circuit to prevent unauthorized use of the truck. A hinged battery compartment cover may be removed completely in a few seconds. The battery may be removed by lifting or sliding it out either side.

(Request Item No. G-28)

Aluminum Bobbin



All-aluminum twister bobbin with grip knob (Allentown Bobbin Works)

A new bobbin development, recently introduced by Allentown Bobbin Works, is the twister bobbin with grip knob which includes a special recessed ring for color code identification. Fitted with paper rings of varying colors, this recess in the grip knob provides immediate visual identification for different yarns, permitting the user to color code by types of yarn, differing

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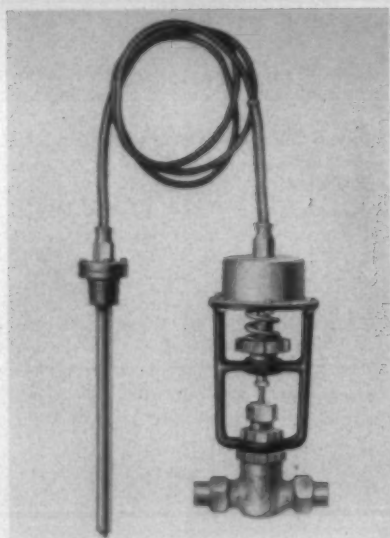
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operations, etc. for easy and immediate separation during production.

The all-aluminum barrel and heads are brazed together and the bobbin is completely anodized to prevent corrosion of any kind. This construction without joints is said to prevent trapping of yarn as no cracks or crevices exist between the heads and the barrel. The bobbin reportedly will stand up to continual steaming and twisting of high tensile nylon yarns. In over 2 years of testing not one has failed in service. The price is said to be substantially less than for comparable bobbins of other materials or constructions.

(Request Item No. G-29)

Temperature Regulators



Single-seated temperature regulator
(Watts Regulator Co.)

Watts Regulator Co. has announced a new accurate line of single-seated temperature regulators for automatic flow regulation of liquids or steam. These self-operating regulators are of two types, direct acting and reverse acting.

Direct acting regulators (155 Series) maintain the liquid temperature by controlling the heating source, such as steam. They are available in sizes $\frac{1}{2}$ " to $1\frac{1}{2}$ " inclusive. Reverse acting regulators (157 Series) maintain the liquid temperature by controlling the cooling source, such as water. They are available in sizes $\frac{1}{2}$ " to 1" inclusive.

Both types are said to be easily adjusted for temperature control within a 40°F operating range within 100°F and 240°F . They feature overheating protection and rugged bronze body construction with replaceable stainless steel seats.

(Request Item No. G-30)

Procion Dyestuffs

Four new Procions—a brilliant blue, brilliant red, brilliant yellow and brilliant orange—have been announced by Arnold, Hoffman & Co. When applied to cellulose, high wet fastness by formation of

a direct chemical linkage between dye and fiber is said to be achieved by these dyes.

Procion Brilliant Blue R is described as a bright reddish shade of blue. It is said to meet in every respect the standards of the Procion group for brightness, fastness to washing and light, solubility, and ease of control in dyeing. Its good fastness to light and washing on cellulose is maintained even in pale depths of shade. It is suitable for fabrics which are to be finished for crease resistance. Compatibility of Procion Brilliant Blue R with the other Procions on cellulosic fibers gives a useful range of blues of intermediate hue with Procion Blue 3G, a wide range of browns in admixture with Procion Orange G, and

a range of attractive greens with Procion Yellow R.

Procion Brilliant Red H3B is a bright red of good wet fastness and high light fastness. In addition to its value in self-shades, this new red is said to form the basis of an attractive range of bright scarlets by admixture with orange or yellow Procions. The stability of printing pastes of Procion Brilliant Red H3B reportedly is good. The new dye exhibits good working properties and ease of application.

Procion Brilliant Yellow 6G gives bright greenish yellow shades of excellent fastness to light and good fastness to washing on cotton, viscose and linen. It is readily

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applied by such established processes as pad-steam, pad-bicarbonate-dry and cold batch methods. In admixture with Procion Blue 3G, the new Procion yellow gives a wide range of bright greens. The lime greens are of interest because of their excellent light fastness and the fact that what fading does occur through prolonged exposure is on tone. Procion Yellow 6G reportedly does not cause catalytic fading of other Procions and does not accelerate the tendering of cellulose on exposure to light.

Procion Brilliant Orange G produces fast, very bright yellowish orange shades. Bright pinks and scarlets are produced by admixture with Procion Brilliant Red 2B and a variety of brown shades are obtained by admixture with Procion Blue 3G. In dyeing or printing on cellulosic fibers, Procion Brilliant Orange G reportedly registers good shade stability in the presence of weak acid or alkali, good light and wash fastness in pale shades and good fastness to chemic. It is said to build up very strongly with increasing redness of tone. Fastness is maintained at all depths. There is no significant shade change on cotton or rayon fabrics which have been resin-finished.

(Request Item No. G-31)

Web Conditioner

The J. O. Ross Engineering Corp. announces a compact, low-cost web conditioner for adding moisture in controlled amounts to textiles. The conditioner comprises a steel enclosure slightly wider than the web to be conditioned, approximately 38" high and 16" thick. It is mounted in the path of the goods at any convenient location and the web travels vertically through



TO FACILITATE easier, faster readings and provide worker eye-comfort in plant areas where natural or other overhead lighting is sometimes partially shut off, the Sheffield Corp. is offering a new series of illuminated models of its air gages, including a new model Micronaire for testing cotton fiber fineness.

it, entering and leaving through slots at the top and bottom, respectively. Models also are available for horizontal web travel.

The outer casing has a layer of insulation between it and an aluminum lining and within this housing are two systems of steam piping. One system sprays the web as it passes between opposing banks of nozzles. The other, next to the aluminum lining, heats the chamber to prevent condensation and dripping. A steam zone at the entrance of the box preconditions the web before it reaches the steam nozzles. Exhaust ports are located at the sides of the preconditioning chamber and a blower exhausts spent steam.

By controlling the steam pressure at the nozzles, it is possible to regulate the amount of moisture added to the web. The user ascertains the moisture content of the product before conditioning, decides the desirable content and regulates the conditioner to add the desired amount. Experience indicates proper regulation for various types of web. Should the web be stopped in process, spray-nozzles are automatically turned off so not to continuously spray the material in one location. The web conditioner may be used as a separate unit or may be installed in tandem with processing equipment.

(Request Item No. G-32)

For the Mill Bookshelf

Norcross Viscometers

The Norcross Corp. has published a new bulletin (No. V-1212) describing its Norcross viscosity control system for adding solvent to correct for evaporation losses.

(Request Item No. G-33)

Springs & Small Stampings

Superb Spring Works Inc. is offering a new booklet describing its complete line of manufactured springs. The company manufactures flat springs, small stampings, extension springs, compression springs, wire forms, heavy-duty springs, torsion springs, power springs, clips and clamps in various metals.

(Request Item No. G-34)

Gaskets And O Rings

A complete line of gaskets, back-up rings and O rings are described in a new brochure published by Crane Packing Co. The gaskets and rings are fabricated from Du Pont Teflon under the registered Crane trademark, Chemlon. Gaskets are available in solid or envelope types. Back-up rings, solid or split; and O rings are available in a full range of standard sizes. Specials can be fabricated to order, the brochure points out.

(Request Item No. G-35)

Penco Steel Cabinets

A new 4-page bulletin on steel cabinets for use in offices and industrial plants is available from Penco Metal Products Division, Alan Wood Steel Co. Bulletin SE-6 describes and illustrates the complete Penco line of steel cabinets. Design and construction features of the line are presented. The bulletin also illustrates 2 other Penco product lines—Penco steel lockers and Penco steel shelving.

(Request Item No. G-36)

Motor Starters And Contactors

Allis-Chalmers' complete line of motor starters and contactors in sizes 4, 5 and 6 (Type 425), 50 to 400 h.p., is described in

a new 12-page bulletin released by the company. Designed to assure full rated capacity, maximum motor protection, longer life and easy maintenance, these starters and contactors have been applied to practically all types of drives including pumps, the company reports. The contactors incorporate A.C.B.O. arc centering blowout, a modern principle of arc interruption which eliminates the need for conventional blow-out coils. The device utilizes thermal convection and magnetic action to center, rupture and quench the arc quickly and effectively.

(Request Item No. G-37)

Allis-Chalmers Textile Motors

Design features of the new Allis-Chalmers textile motors are described in a new bulletin released by the company. Specifically designed for textile mill application, the motors are lint-free and self-cleaning. They are available in open or T.E.F.C. construction, with N.E.M.A. Design B or C characteristics, and in certain sizes, with a dual torque design for roving frames. Construction features include corrosion-resistant cast iron frame and housings, prelubricated bearings and polyester film insulation system. The T.E.F.C. motors are also provided with drain for condensation. The bulletin carries frame sizes and dimensions for the various types of textile motors, in addition to performance curves for the roving frame motors.

(Request Item No. G-38)

Non-Ionic Surfactant

Onyx Oil & Chemical Co. has published a comprehensive application manual on "Neutronyx 600 in the Textile Industry," detailing cost savings in many areas. This new, completely synthetic, non-ionic surfactant, Neutronyx 600, is characterized by extreme versatility, stability and chemical compatibility, the manual points out. Application methods are described for achieving lower costs in wool scouring, fabric fulling, carbonizing and color stripping; and in rayon and cotton wet processing, bleaching, desizing, as a dyeing and finishing assistant, for scouring dyed or processed

goods, in oxalic acid rust removal, and in emulsifying mineral oil.

(Request Item No. G-39)

Polyethylene Glycols

A revised technical data bulletin on Mathieson polyethylene glycols has been issued by the industrial chemicals division of Olin Mathieson Chemical Corp. The bulletin gives use information, physical properties, specifications and shipping data on 3 compounds: Poly-G 1000, Poly-G 1500 and Poly-G B1530. All are white waxy materials melting between 38 and 45° C.

(Request Item No. G-40)

Controlled Volume Pumps

The Milton Roy Co. has released Bulletin No. 557, "H2O Controlled Volume Pumps." The H2O controlled volume pump, available in simplex or duplex models, is engineered to provide low-cost metering and pumping of non-corrosive liquids at normal temperatures with repeatable accuracy. Bulletin 557 contains complete specifications, design features, dimensions and ordering data. Milton Roy packaged systems and barrel pumps are also illustrated and described.

(Request Item No. G-41)

Lighting-Type Busway

A lighting-type busway, rated 50 amps., 300 v. a.c. or d.c., is the subject of a 12-page bulletin issued by General Electric's distribution assemblies department. Known as Type LTG and available in 2, 3 or 4-pole construction, this busway is designed for use as a power supply for lighting fixtures, small power tools and machines. The new publication gives detailed application information. It lists short-circuit ratings, voltage drop, dimensions, weights, installation details and methods of hanging. Also included is a brief description of General Electric's new roll-in method of installing this busway.

(Request Item No. G-42)

General Purpose Pumps

S. Gelber & Sons Inc. has published a new catalog on condensate units, coolant systems and general purpose pumps. This new 24-page catalog contains a diversified listing of pumps from a midget size to large, sealed automatic pumps of great capacity. Special information on solutions to difficult pump problems is available free.

(Request Item No. G-43)

Corrosion-Resistant Lining

Costly corrosion problems are thoroughly discussed in a new bulletin offered by Pocomo Fabricators Inc. The firm manufactures special formula C-17 Pre-Krete, a low-soluble cement-base lining widely used in lining the interiors of steel water heaters, tanks, vats and other vessels handling bulk liquids. Pre-Krete forms a hard, durable lining designed to prevent oxidation and galvanic corrosion. A feature of the new bulletin is a summarized report of an exhaustive laboratory examination of Pre-Krete under extreme test conditions.

oratory examination of Pre-Krete under extreme test conditions.

(Request Item No. G-44)

Shadowgraph Scales

The Exact Weight Scale Co. is offering a new 8-page brochure on its line of Shadowgraph scales designed for use in the textile industry. It contains numerous illustrations, detailed specifications and important features of 34 different models, ranging in capacities up to 100 lbs.

(Request Item No. G-45)

G. E. Tachometers

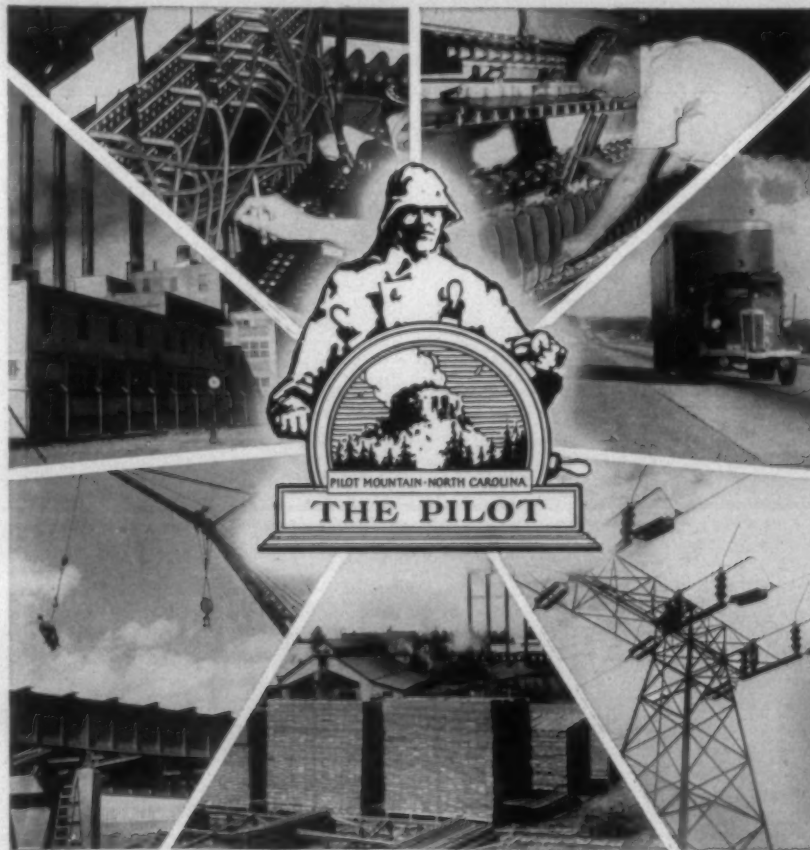
The General Electric Co. has published a

12-page bulletin on its line of tachometers, generators-indicators-recorders. The bulletin describes the variety of generators and indicating or recording instruments available for measuring speed of any rotating equipment, including a.c. and d.c. tachometer generators and hand tachometers.

(Request Item No. G-46)

Polyvinyl Acetate Emulsions

A manual on the use of Gelva KR polyvinyl acetate emulsions for textile finishing has been published by Shawinigan Resins Corp. The manual contains full information on the physical properties of the various KR types. In separate sections it deals with the compounding and application techniques for the KR emulsions. Also included in the



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FOR THE MILL BOOKSHELF

booklet is a complete section covering a wide variety of typical application formulations. Gelva KR emulsions are used as a finish for cottons and synthetics to improve hand and stiffness. Shawinigan Resins is a major supplier of polyvinyl acetate emulsions to the textile industry.

(Request Item No. G-47)

Beckman pH Electrodes

Beckman Instruments Inc. has published an 8-page bulletin featuring Beckman pH electrodes for laboratory and portable pH meters. The bulletin is made up in simplified chart-form, completely indexed and illustrated—designed to guide users in selecting correct pH electrodes. The new revision is one of a 5-bulletin package which also includes information on the Zeromatic, Pocket pH and other Beckman pH meters.

(Request Item No. G-48)

Materials Handling

Continental-Diamond Fibre Corp. has announced publication of a new 16-page catalog describing the company's complete line of materials handling containers. Titled "CDF Materials Handling Containers," the catalog describes vulcanized fibre trucks, trays, boxes, baskets, etc., and provides information on uses, sizes, colors and features of each item.

(Request Item No. G-49)

Powered Industrial Trucks

The Industrial Truck Association has announced that its "Handbook of Powered Industrial Trucks" will be published this Fall. The 94-page handbook, the first such manual to cover all types of powered industrial trucks, is the result of more than two years of combined effort by various association committees. The book is divided into five sections covering selection, procedures and operation. Of particular interest is a 20-page section devoted to engineering data, stated to be the most complete compendium of technical information on industrial trucks

ever published. The association states that plans now call for distribution of the manual for some time the latter part of September or early October. Advance orders may be placed at this time with the Industrial Truck Association, Ninth and F Sts., Washington 4, D. C. Price per copy is \$5.00.

Edgar Marburg Lecture

(American Society for Testing Materials, 1916 Race St., Philadelphia, Pa.; 47 pages; \$1.50 each)

The American Society for Testing Materials has announced publication of the Edgar Marburg lecture, "The Industrial Chemistry, Properties and Applications of Silicones," by Charles E. Reed, which was presented at the 1956 annual meeting of the A.S.T.M. Dr. Reed is general manager of the silicone products department of the General Electric Co., Waterford, N. Y.

Techniques of Plant Maintenance & Engineering

(Clapp & Poliak Inc., 341 Madison Ave., New York 17, N. Y.; 273 pages; \$10.00 postpaid)

This is a report of the conference proceedings in conjunction with the 1957 Plant Maintenance & Engineering Show. This year's report includes 29 papers, most of them having application in all industries. A number of them are devoted to specific industries—the textile industry included.

Safety Data Sheet

Is your portable electric equipment properly grounded? If not, burns and death-causing shock may result, according to the National Safety Council. Indirect injuries, too, may arise from use of ungrounded portable electric equipment if it's defective. For example, a workman received a slight shock from a defective tool and dropped it on his foot—suffering a painful injury. Slight shocks also have caused fatal falls from heights.

Even equipment that appears to be in safe operating condition may have shorted, broken or exposed wires. They may make

contact with the metal framework of the equipment, causing it to become energized. To reduce the danger of electrical shock, it's important that a separate ground wire be provided from the tool to a low-resistance ground connection. Water pipes, metal frameworks of buildings, or other metal structures in direct contact with the earth, may be used to ground equipment.

Here are some suggestions on grounding portable electrical equipment: (1) When wiring is enclosed with metal conduit or protected by armored cable, all couplings and fittings used to make connections between the conduit or cable and the electrical equipment should provide metal-to-metal contact to assure a continuous ground return. (2) If the wiring is nonmetallic sheathed cable or knob and tube work—such as is used in construction work—a third wire must be connected to the grounding terminal on the receptacle to provide a good conducting path to a grounding electrode or water pipe. (3) Grounding wires should be checked to see that the size is correct for the capacity of the nearest fuse or other automatic cutout. (4) No fuses, automatic cutouts or hand-operated switches should be inserted in a grounding line. To insure automatic use of the ground, a common type of plug with a U-shaped grounding blade and two standard parallel polarizing blades now can be used.

The foregoing and additional information is contained in National Safety Council Data Sheet D-299—"Grounding of Portable Electric Equipment"—one of many prepared periodically by the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

A.A.T.C.C. Colour Index

A new price of \$112 per set for the 4 volumes of the *Colour Index*, which is being published jointly by The Society of Dyers & Colourists of England and the American Association of Textile Chemists & Colorists, has been set by the A.A.T.C.C. for U. S. sales. The *Colour Index* is an encyclopedic record of names, manufacturers, methods of applications, fastness properties, established usages, reactions, etc., for about 5,000 dye entities.

Serving The Textile Industry

Southern Belting, Halsmith Consolidate Operations

The Southern Belting Co. and its wholly-owned subsidiary, The Halsmith Corp., have announced their consolidation—the resulting organization to be known as Southern Belting & Transmission Co. The ownership and management of Southern Belting & Transmission Co. will remain substantially the same as the former Southern Belting Co., with the addition to the board of directors of Roy S. Smith, president of Hal-

smith, as vice-president in charge of engineering of the new organization. Southern Belting Co. for 67 years has manufactured leather products for the textile industry.

National Starch To Move To New Quarters In 1958

National Starch Products Inc. has signed a long term lease for the entire 13th floor of the building now under construction at 750 Third Ave., New York City. The new space will be occupied as executive and ad-

ministrative offices. Occupancy is scheduled for May 1958. Present offices are at 270 Madison Ave.

Tennessee Eastman To Begin Verel Production

Tennessee Eastman Corp., Kingsport, Tenn., has announced it will start production of Verel modified acrylic fiber in commercial quantities soon. Tennessee Eastman, an operating division of Eastman Kodak Co., announced development of the fiber

about a year ago. Initial commercial production will be on 16-denier staple for the tufted rug industry.

Keever Starch Co. To Build Greenville Analytical Lab

Keever Starch Co., Columbus, Ohio, manufacturer of Victor Mill Starch, will establish an analytical laboratory in Greenville, S. C., sales headquarters for the firm's textile division. Cost of the building and equipment is estimated at \$50,000. Completion is expected late this Fall.

Neptune Meter Buys Large New York Plant

Neptune Meter Co., a leading manufacturer of measurement and control equipment, recently completed the purchase of a 4-level, city-block-square factory building in New York City in a transaction involving some \$2 million. Purchase of the building is another step in Neptune's expansion and diversification program started more than 5 years ago. The new plant will provide more than 270,000 sq. ft. of space for the firm's liquid meter division. The building will first be renovated, with operations expected to get under way in about 6 months.

Steel Heddle To Handle Stedco-Southern Sales

Steel Heddle Mfg. Co. has announced that the sales and servicing of automatic loom bobbins and other allied products of Stedco-Southern Inc., Greensboro, N. C., are now being handled exclusively by the Steel Heddle sales organization. According to the company, this step was taken after a considerable period of time and effort was devoted to improving the Stedco-Southern plant and product. Steel Heddle, with general offices in Philadelphia, Pa., has other manufacturing plants and sales offices in Greenville, S. C., Atlanta, Ga., Lawrence, Mass., and Granby, Quebec. The company is one of the world's largest manufacturers of textile weaving accessories.

Chemstrand Issues First Annual Report

The Chemstrand Corp. last month issued its first annual report to employees. Titled 1956—*A Year of Progress*, the report reviewed Chemstrand's progress since it was chartered in 1949. Edward A. O'Neal Jr., president, reported, "during 1956 the plans of Chemstrand's founders began to be realized as our company occupied an increasingly prominent and respected place in the new but highly competitive chemical textile fiber industry."

Continuing, Mr. O'Neal said that nylon production last year at the firm's Pensacola, Fla., plant was up 24% from 1955, and that the plant's entire capacity of 59 million pounds was being used at the end of 1956. "The production of Acrilan (manufactured at Decatur, Ala.) rose even more dramatically," he pointed out, "keeping pace with a rising sales curve. At year's end

Acrilan production was approaching capacity with all-out production scheduled for March 1957."

Chemstrand is expanding both the Acrilan plant from 30 to 45 million pounds annual rated capacity and the nylon plant to 114 million pounds. Both expansions are scheduled for completion during 1958.

New Fiber Application Lab Opened By Allied Chemical

A new fiber application laboratory, designed to serve areas of testing and investigation, has been opened in Chesterfield, Va., by the Allied Chemical & Dye Corp. The new laboratory was begun more than a year ago. According to George H. Hotte, director of fiber sales and service, the facility is "basically a service tool for use by all those concerned with the development, uses and varied applications of Caprolan, Allied's polyamide fiber." Adjoining the modern man-made fiber plant of Allied's National Aniline Division, the half-acre laboratory will offer Allied's customers the opportunity to experiment in new designs and new applications. The company's quality control department will also conduct tests on standard Caprolan materials.

The laboratory's equipment, such as looms, warpers, full-scale slashing, opening, drawing, spinning, twisting and winding, tufting and some texturizing equipment, will also be used to develop fabrics of all kinds which capitalize on the special performance values of Caprolan. Staffed by textile engineers, the laboratory is under the supervision of William E. Jennings, who has 30 years' experience in all major phases of the textile industry.

Friday Forms New Textile Supply Firm

D. L. Friday has announced the formation of Friday Textile Machine & Supply Co. Inc., Gastonia, N. C., for the manufacture and sale of textile parts and appliances. The firm will act as exclusive agent in North Carolina, South Carolina and Virginia for J. M. Nash Co. of Milwaukee,

Wisc., manufacturer of automatic bobbin refinishers, automatic quill polishers, automatic bobbin sanders and automatic bobbin washers.

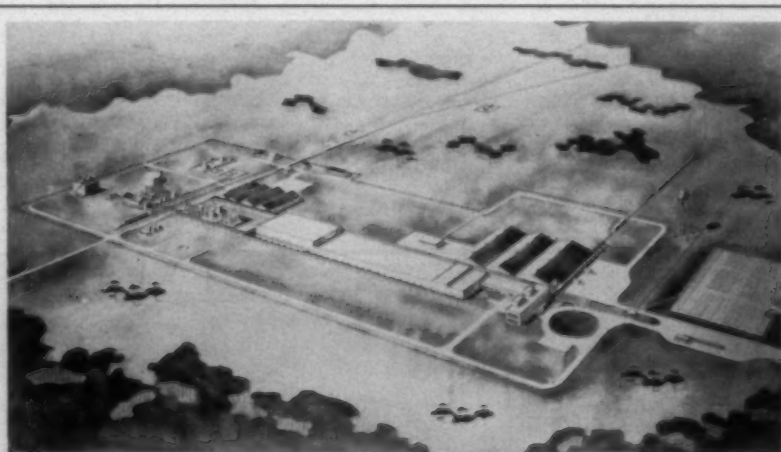
The new firm will also serve as agent for Kennett Equipment & Machinery Co., Kennett Square, Pa., for a complete line of materials handling equipment; and for the Allen Warper Co., Lowell, Mass., manufacturer of high-speed warp beams, beam heads, beam barrels, etc.

Butterworth Expanding Research & Development

H. W. Butterworth & Sons Co., Bethayres, Pa., has announced an accelerated program of research and development in the field of new machinery for the wet end of textile finishing. Butterworth, a division of Van Norman Industries, has indicated that its current research program includes an emphasis on new methods of dyeing, bleaching and washing. The program also includes adapting many foreign patents for use in the American market. During 1957, the firm will invest a total of about \$250,000 in research and development of new textile finishing processes and equipment. Among standard products in the Butterworth line are 84 diversified machines for such functions as dyeing, bleaching, drying and finishing for the textile industry, and spinning and processing machines for the makers of synthetic fibers. Research, manufacturing and development facilities at the Butterworth plant have also been greatly expanded. A five-year million-dollar re-equipment program is currently in full swing.

Air Reduction Co. Building Research Lab

Air Reduction Co. Inc., manufacturer of acetylenic-base chemicals for the textile industry, is building a modern, two-story polymer laboratory at Murray Hill, N. J., to house additional chemical research facilities. The new laboratory, to cost over \$500,000, will be completed by the end of this year.



AMERICAN CYANAMID CO. has broken ground for this modern plant near Pensacola, Fla., for the production of its new Creslan acrylic fiber. Scheduled for completion late in 1958, the plant will be situated on an 1,800-acre tract fronting on Escambia Bay. It will be known as the company's Santa Rosa Plant.



WATCHING

WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Bitterness in Congress over the civil rights proposal is probably deeper than at any time since the days of Thad Stevens and Ben Wade in the time of Reconstruction. Some Republican speeches on the House floor were as vitriolic toward Southern states as have been heard in House history. Mrs. Church, from the north end of Chicago, denounced racial conditions in Alabama and Mississippi as bordering on savagery and barbarism. She stuck to her charges even when they were denounced by House members of those states.

The Civil Rights Bill was passed in the House under furious cracks of the party whip by Republican Leader Joe Martin. He made a cold break with his late allies, the Southern members, who had often helped him in a legislative coalition, or aided him when, as Speaker, he presided over a rebellious Republican majority. There was a mixture of panic, hysteria and desperation in Martin's whip cracking; the end result manifestly was to try to recapture Negro votes in Northern cities.

The President's sharp turn to proponents of the Civil Rights Bill, and accepting it as his own, has alienated virtually every Southerner in Congress. Even members from districts that went for Eisenhower in recent elections, in hope of a way out of the mess of New-Fair dealing, have turned away. The proposed "Operation Dixie" to launch "modern Republicanism," and a two-party system in the South, is declared dead before it starts. Southerners look on the drive as only a device of party politicians in the North to grasp Negro votes.

The President is struggling for Republican unity in an atmosphere where one party row collides with another, and peace seems far distant. Republicans and "modern Republicans" split on every move to achieve unity, and the widest split since the Bull Moose episode of 1912 seems in the making. The President says he is "disappointed" in the attitude of some Republicans, which means conservatives. The Democrats are making the record in this Congress, which is the one on which they will have to seek party control in the next election.

Theodore Roosevelt, with his "square deal," is the only Republican President since Abraham Lincoln who tried to "modernize" his party. He got away with it for a time, but reduced the party to a shambles four years later. Unlike Mr. Eisenhower, he never had to face a Democratic-controlled Congress, or depend on a coalition of Democrats and Republicans to enact his legislative program. When he split his party from stem to stern, he succeeded in electing a Democrat as President.

Demand for legislation to curb the seizure of legislative powers by the Supreme Court is becoming stronger in Congress. At least one criminal, faced with a death sentence, has been turned loose in one decision for no better reason than that "his undefined rights" had suffered. Several recent decisions are aimed at "preventing police abuses," even if they exist, but without defining them. Assistant Attorney General Olney said a "great many serious crimes will go unpunished" because of the decisions.

Four decisions in the final days of the Court's session jerked the rug from under law enforcement against Communist conspiracy and plotting. The Court normally held that since the Communists have changed their party name since the



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1957

Smith Act was passed, the law no longer applies to them. Preaching overthrow of the government by violence is not a crime, the Court says, so long as the preacher does not actually engage in trying to do it.

Usurpation of unauthorized powers by the Supreme Court are frankly described in the House as brazen and fraudulent. It is called seizure of the law-making power to "amend the Constitution to suit its own perverted ideas." One observation is the Court has reached the ultimate in absurdity, and shown "immense capacity to make a fool of itself." Absurd distinctions that do not exist in the law are asserted to have been made to reach decisions which more exactly "reflect an advanced state of socialistic senility."

Most disturbing aspects of the discussions in Congress of the Court's decisions is that they are being written by the law clerks of three or four of the justices. These clerks are mostly fresh out of law schools; chiefly Eastern law schools, with evidence that legalistic formula and socialistic ideology are being mixed as a pattern within which a decision may be formulated.

Dave Beck has come forward with a new explanation to his teamster union members for invoking the Fifth Amendment some 200 times. The press, he said, "did not print the truth about the hearings," and his lawyer, Williams, who succeeded Senator Duff, left the McClellan Committee "hanging on the ropes" as he challenged its jurisdiction. He did not mention he refused to recognize Dave Jr. as his son.

Union leaders are complaining loudly that revelations of corruption and stealing have seriously impaired their prestige in Europe and elsewhere. Recent junkets of Beck to Europe, they say, have not helped their prestige, and union bosses abroad refer in disgust to "Beckism." The finger pointing abroad, they say, is at all American unions, and Communists are proclaiming that all unions over here are filled with thieves, racketeers, gangsters and thugs, and that they are controlled by the underworld.

Beck may go into retirement with a personal pension of \$50,000 a year, and his home, but the question is whether his gang will remain in control of the teamsters union. Beck has a powerful organization, with a tight grip on top union posts, and there is no indication that his cronies are getting out. Evidence points strongly to the Beck faction continuing in control if Beck retires, and resisting the best efforts from within the union, or through the A.F.L.-C.I.O., to effect a house cleaning. Right now a house cleaning is quite far distant.

The House is studying reports that foreign governments have made vast forbidden profits in arms purchases financed with U. S. aid. Comptroller General Campbell told a House committee that nearly \$3 billion in arms aid funds have been used by recipient countries to buy goods in other countries under "off shore procurement" agreements. Some of the money sifted through to Russia. The practical effect is that U. S. military aid is financing foreign trade imports for several countries getting it.

Forces of big government are making a final break-through in the battle to hold the line against bigger spending this year. For everything that is being lopped off, something new is being put on. Federal public housing is being padded with the biggest grants ever, and this year's "pork barrel" is a record with 180 river and harbor projects, calling for \$1.5 billion.

Big spenders hit the jackpot in the Senate in a proposal to raise the pay of 500,000 postal employees by 12 1/2 per cent, and 950,000 other Federal workers by 7 1/2 per cent. Pending classification, not even rough estimates were available as to the extent to which Federal payrolls would be increased. However, the increases are expected to serve as a signal to touch off a new round of wage demands in private industry.

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable

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The Cotton Problem

There is little likelihood that any legislation designed to cure the "cotton problem" will get enacted at the current session of Congress. But groundwork is being laid for a big overhaul of all farm programs and policy—with cotton in the forefront—and actual legislative changes are slated for 1958. The real significance at the present would seem to lie in the fact that the cotton industry is making some slow progress, but progress nevertheless, in its first real concerted attempt to get together on just what should be done for the cotton producers, the spinning and weaving mills and the broad cotton industry as a whole.

The matter is hardly as simple as the foregoing might seem to indicate, but the trend certainly seems to point, in general, in that direction, if all the bushes can be cleared away so that the trees can be plainly seen. In the big overhaul of farm programs, the first big wrangle is over cotton—and that is not surprising and is indeed as it should be. For in recent months there has seemed to be an ever-widening realization, not only within the industry, and among government and farm leaders, but on the part of the public as well, that the government's programs have been actually paying a very successful industry to wreck itself. That makes sense in no man's language.

Actually, Secretary of Agriculture Benson himself blew the lid off the issue not so long ago in a letter to the Senate Agriculture Committee. He said, in effect, that present farm programs—based as they are on acreage allotments—are not working. Further, present support programs will tend to encourage further surplus production. Lawmakers, for their part, generally agree that allotments have failed, and put part of the blame on U.S.D.A. support policies and part on present laws. As a result, U.S.D.A. and Congress are busily trying to find new and better programs.

The House Agriculture Committee has held hearings on a proposal to make direct compensatory payments to cotton

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growers. Federal cash payments—to be made only on domestically-consumed cotton—would equal the difference roughly between 75 per cent of parity and 90 per cent. There's both strong opposition and support for this idea. The House Appropriations Committee has gone along with this approach to a certain degree—but it prefers users of cotton make up the difference in grower receipts, rather than the U. S. Treasury. The probing this year is apparently altogether of an exploratory nature, with the big re-vamping to come in 1958.

At least that seems to be the general consensus both in Washington and in the trade. But, unmistakably, the pendulum seems to be swinging against past policy, and something close to settlement of the complex cotton problem may stand a pretty good chance. It is simply a matter of that if there are sufficient squawks, something inevitably has to be done.

In the past the mill industry, or the American Cotton Manufacturers Institute, has refrained as such from taking a position on the subject of cotton pricing policy, but that is now no longer true, and the official statement of the A.C.M.I. views, as presented to the House Agriculture Committee by C. A. Cannon, chairman of a special A.C.M.I. Cotton Policy Committee, have been received with real interest by all branches of the broad cotton industry.

The statement makes it abundantly clear that A.C.M.I. believes that, as in the past, the determination of cotton policy should rest primarily with the producers of cotton. Yet it makes the point—and very effectively, too—that mill men feel that their experience in processing the raw material and merchandising its products should be considered with regard to certain fundamentals which must be a part of any successful long-range program for cotton. It is, of course, emphasized that the cotton manufacturing industry is not seeking "cheap" cotton. Contrarily, the record shows that the industry has enjoyed good earnings when cotton prices were at high levels. But the industry is interested in

competitively priced cotton; otherwise, its cotton products cannot be price competitively.

The heritage of the mill industry is closely geared to a cotton economy; it has billions of dollars invested in plants and equipment; over the years it hopes to invest billions more. Yet it cannot be reasonably expected to be satisfied with a stagnant rate of cotton consumption in a period of rapid population increase when practically everything else the public uses is enjoying a vast upswing in consumption. It seems very clearly indicated that consumption of textile fibers and/or textile substitute materials will increase, both in this country and abroad. The question is whether a fair share of the increase will go to cotton or whether cotton policy will force the primary processors, and the consuming public, away from cotton and toward cotton's competition.

The ability of cotton to compete is directly related to the soundness of government policy. The continued use of emergency palliatives may bolster the situation temporarily, but such expedients fail completely to generate the expansion process. There is urgent need for a positive and courageous course of action on the part of both government and the entire raw-cotton industry.

In as brief an outline as possible, what the mill industry wants is a government cotton policy that will make the fiber competitive, improve farm incomes and reduce program operating costs. In presenting the A.C.M.I. views to the House Agriculture Committee, Mr. Cannon, president of Cannon Mills Co., referred to the disposal by the government of 12,200,000 bales of surplus cotton at world prices as an example of what can happen when the fiber is placed on the market at a competitive price. "Foreign sales of American cotton skyrocketed beyond even the most optimistic predictions," he said, emphasizing that "we are positively convinced that a competitive price for all cotton in the domestic market will have just as sensational a result."

He said it is most important for the producers to share in the great demand for cotton from abroad and noted that "we should now be thinking in terms of exporting around seven to seven and a half million bales of the 30 million bales expected to be consumed in foreign lands this year." He called the domestic rate of consumption of cotton "stagnant" when related to the tremendous population growth being experienced and said the cotton industry is not satisfied with it.

Stressing the "urgent need for a positive and courageous course of action on the part of both government and the entire raw-cotton industry," Mr. Cannon said that for our whole raw-cotton industry to be vigorously alive and growing, any permanent policy must involve the following six fundamentals: (1) an immediate and significant increase in cotton acreage above the 17½ million acres allotted this year, and which likely will be allotted in 1958; (2) clear-cut procedure for improving the net income position of the cotton farmer; (3) one-price system, with the price realistically geared to competitive factors, including foreign-grown cottons and other important competing materials; (4) the objective of encouraging cotton to move through normal trade channels, rather than through government hands; (5) a sizeable reduction in the enormous cost of the present program and a clear objective for further reduc-

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4. The Proved Advantages of Modern Weaving Equipment.
5. The Proved Advantages of Modern Dyeing Equipment: (Row Stock Dyeing, Package Dyeing, Beam Dyeing, or Piece Dyeing)
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Members of the Southern staff of a nationally known firm of textile industrial engineers have consented to act as judges in the contest.

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Articles must not exceed 1,000 words and must be typewritten. They will be judged on the basis of the **factual** information they contain—the savings in labor costs, increased production and improved quality that have been realized from the investment your mill has made in modern equipment, or that you know from experience **could** be realized from such an investment. Specific facts and figures will weigh heavily with the judges.

Articles must be original and any article that contains statements or figures copied from another article on the same subject will not be considered.

Prize winners will be announced and winning articles on each subject will be published in the October issue of **Textile Bulletin**. (If requested, the name of the author and/or mill will be withheld.) All articles will remain the property of Clark Publishing Company.

Entries must be postmarked not later than midnight, August 15, 1957, and each must carry the name of the author, his position and the name and address of the mill.

Contest is limited to superintendents, overseers, master mechanics and other operating personnel of Southern spinning and weaving mills and the plants that dye and/or finish the products of these mills.

Select now one of the above subjects, gather the essential facts and submit an article in this interesting contest in which every entrant will be a winner and **YOUR** award may be one of the cash prizes.

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EDITORIALS

tions in the years ahead; and (6) the exclusion of any form of processing tax on the manufactured product.

He said the U. S. cotton industry, from the farmer through the final processor, stands at a point of determination regarding a course for the future. One course leads very shortly to consumption by domestic mills of around eight million bales and an insecure export market for perhaps three to five million—for a total off-take of 11 to 13 million bales—with a downward trend. This course would tend to make it impossible to price cotton's products competitively and, accordingly, lessen interest in cotton's future.

The other course, he emphasized, leads shortly to domestic consumption of 11 to 12 million bales and an export market for five to six million—for a total off-take of 16 to 18 million bales—with an upward trend. This course would lead to a renewed confidence on the part of the domestic consumer and the investment of hundreds of millions of dollars each year in the processes necessary to keep the product competitive, it goes without saying.

As for the A.C.M.I. insistence on exclusion of any form of processing taxes on the manufactured product, Mr. Cannon said: "It is completely fallacious to assume that any product can be helped by being taxed. It is not possible to equalize the competitive disadvantage that would be created for cotton products by taxing the whole wide range of materials with which cotton competes. Furthermore, the whole American business system and the public rebels at the concept of taxing one product for the benefit of another." With that concept, there can be no logical argument.

Obviously, the plan advocated by mill men would result

in a sizeable reduction in the enormous cost of the present program and a clear objective for further reductions in the years ahead. Obviously, too, there have been accumulating signs that neither the Congress nor the public will tolerate a continuation of the present high cost of the cotton program. On the other hand, there is certainly justification for a government outlay that is geared to a realistic program of self-help for the cotton farmer, particularly one that in the beginning represents a substantial reduction below current costs, as Mr. Cannon so ably has pointed out.

A one-price system for cotton realistically geared to competitive factors is being urged not only by A.C.M.I., but by representatives of the American Cotton Producer Associates and the American Cotton Shippers Association. According to Mr. Cannon, the Jones-Abernathy-Gathings House bill comes closer to meeting A.C.M.I. objectives than any other measures so far introduced. This House bill is the one sponsored by the A.C.P.A. and the one which was supported by the Memphis industry-wide conference a few weeks ago.

The American Cotton Shippers Association, according to E. F. Creekmore, president of the group, endorses, as a transitory measure, the principles of Senate Bill 2226, with certain modifications. This bill embodies some of the basic ideas agreed on by the Memphis conference. It provides for a single price system with cotton moving through private commercial channels rather than the C.C.C. The futures exchanges would be useful again in both domestic and foreign business. Additional acreage would be allowed producers, and they would be protected by equalization payments during an adjustment period. As for the modifications, Mr. Creekmore says A.C.S.A. feels that in addi-

TEXTILE INDUSTRY SCHEDULE

— 1957 —

- *Sept. 4-6 (W-F)—Joint conference, **FIBER SOCIETY INC. and THE TEXTILE INSTITUTE OF MANCHESTER**, Hotel Statler, Boston, Mass.
- *Sept. 12-13 (Th-F)—Annual meeting, **CARDED YARN ASSOCIATION**, The Cloister, Sea Island, Ga.
- Sept. 14 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Harmony Club, Columbus, Ga.
- Sept. 19-20 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, Barringer Hotel, Charlotte, N. C.
- Sept. 20 (F)—**SOUTH CENTRAL SEC., A.A.T.C.C.**, Hotel Patton, Chattanooga, Tenn.
- *Sept. 23-25 (M-W)—Fall meeting, **THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS**, Hotel Statler, Hartford, Conn.
- Sept. 27-28 (F-Sa)—**COMBED YARN SPINNERS ASSN.**, The Cloister, Sea Island, Ga.
- Sept. 28 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Hotel Barringer, Charlotte, N. C.
- Sept. 28 (Sa)—Fall meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, Georgia Tech, Atlanta, Ga.
- Oct. 2-3 (W-Th)—**CHEMICAL FINISHING CONFERENCE** (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.
- *Oct. 7-9 (M-W)—Technical advisory committee and board of trustees meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.
- Oct. 9-10 (W-Th)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.
- Oct. 10-11 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSN.**, The Clemson House, Clemson, S. C.
- *Oct. 12 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Auburn.
- Oct. 12 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Auburn, Ala.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

*Listed for the first time this month.

†Tentative listing.

‡Changed or corrected from previous issue.

- *Oct. 15-18 (Tu-F)—Fall meeting, **COMMITTEE D-13 ON TEXTILE MATERIALS**, American Society for Testing Materials, Sheraton McAlpin Hotel, New York City.
- *Nov. 14-15 (Th-F)—Annual conference on Electrical Applications for the Textile Industry (sponsored by the Textile Industry Subcommittee and the General Applications Committee of the **AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS**), North Carolina State College, Raleigh.
- Nov. 14-16 (Th-Sa)—National convention, **AMERICAN ASSN. of TEXTILE CHEMISTS & COLORISTS**, Hotel Statler, Boston, Mass.
- Dec. 7 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Dinkler Plaza Hotel, Atlanta, Ga.

— 1958 —

- Jan. 27-28 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, Phoenix, Ariz.
- *Feb. 12-14 (W-F)—**COTTON RESEARCH CLINIC** (sponsored by the National Cotton Council), The Carolina, Pinehurst, N. C.
- *Mar. 18-21 (Tu-F)—Spring meeting, **COMMITTEE D-13 ON TEXTILE MATERIALS**, A.S.T.M., Sheraton Park Hotel, Washington, D. C.
- Apr. 10-12 (Th-Sa)—Annual convention, **AMERICAN COTTON MFERS. INSTITUTE**, Hollywood Beach Hotel, Hollywood, Fla.
- Apr. 30-May 1 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, The Clemson House, Clemson, S. C.
- May 19-24 (M-Sa)—**NATIONAL COTTON WEEK**, sponsored by the National Cotton Council of America.
- May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), New York Coliseum, New York City.
- June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, The Grove Park, Asheville, N. C.
- Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.
- †Fall—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

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tion to limiting its operations to an interim transitional period, the proposed equalization payment should have a stated maximum in cents per pound.

While the feeling generally seems to be that segments of the industry are making significant progress to unite behind a realistic program for cotton, the various views on so complex a subject or problem, even so, could hardly be called unanimous. This, indeed, could scarcely be expected. The idea seems to be pretty well accepted and agreed upon, though, that the cotton farmer must have more acreage or he cannot possibly survive.

The smaller producers are already on the way out. Take such sections as East Texas where the average cotton field is probably around ten acres. This year virtually all of this land went into the soil bank. They didn't get much per acre when compared to some other sections of the country, but it was better than nothing and they were sick and tired of attempting to make any money out of a small cotton acreage.

Likewise, the understanding seems pretty general that the domestic mill industry is under a worsening handicap because it must pay the support price for cotton, which is six cents or more than is paid by spinners in other countries who are buying on our surplus disposal plan. Mills are turning to man-made fibers which are cheaper than cotton, and which do not have the wastage that is found in a bale of cotton today. Thus, no one can reasonably dispute that the time is not now ripe for all segments of the cotton industry to get together. And it is utterly unrealistic, of course, for anyone not to realize and acknowledge that there is danger in perpetuating the surplus disposal plan. Even as Secretary Benson has pointed out, as soon as our cotton surplus is disposed of, under the law, the support price will go up, our exports will dwindle to virtually nothing, and cotton will again begin to pile up in our warehouses.

The American Cotton Producer Associates, formed by representatives of each segment of the industry, advocates one plan; the American Farm Bureau is advocating another; and there are several interests of lesser importance which have their pet ideas. Unless all the various interests do get together in the main, or on essentials, and unless great pressure is brought upon Congress for the kind of legislation that is needed, the U. S. cotton industry must inevitably continue upon its downward trend.

A bill introduced by Senator Symington and others incorporates the recommendations of the American Cotton Producers' Associates. Another, sponsored by Senator Eastland and others, carries the recommendations of American Farm Bureau Federation. The first measure involves a one-price system, with cotton allowed to sell at world prices, and the farmer to receive compensatory payments between the market price and 90 per cent of parity on that portion of his crop moving into domestic consumption. The second measure provides for farmers to vote on whether they want the present program or a different one under which acreage would involve a two-price plan, with foreign mills buying at 75 per cent of parity, for one year only. This program would involve a two-price plan, with foreign mills buying at the world price and U. S. mills paying the supported price.

The simple fact of the matter is, of course, as F. E.

Grier, president of Abney Mills, so aptly put it recently, that the cotton industry has been and is mighty close to being choked to death by too much benevolent government. Legislated attempts to cure cotton's troubles have brought only new problems and a burdensome surplus that has played havoc with almost every section of our industry. One simply cannot escape the fact that the outlook is for cotton to continue its perilous downhill course unless some action is taken to make it competitive again. Cotton simply has priced itself artificially right out of the market, giving impetus to a boom in man-made fibers, plastics and other cotton substitutes. By and large, the decline of cotton consumption is the classic result of the continuance of measures undertaken to cure an emergency situation after the emergency has passed.

There is no other way of viewing a two-price system for U. S. cotton except as a ridiculous situation. There is one price for overseas buyers and one for domestic purchasers. The domestic buyer, of course, pays the higher price, and in addition, he has the opportunity of paying taxes to make up the losses incurred by the sale of price-supported cotton on the open overseas market. The mill man also can watch this cotton, sold cheaply overseas, come back in goods that are priced below his and consequently, he meets them again in trying to hold on to a fast-dwindling export market for his goods. It simply doesn't add up either to logic or good sense.

Synthetics are in a much better competitive position since they can be priced on the basis of supply and demand factors and are under no government influence. Once there was a great cotton economy, but it might well be said that it was killed by government interference. Most mill men seem to feel that the price factor alone, for instance, has enabled synthetics to move into the industrial fabrics picture and that the million bales of cotton lost in this market to synthetics could be regained if the raw cotton price were lowered in accordance with the basic law of supply and demand.

Unless something is done, cotton today indeed sits on a shaky throne. For instance, last year cotton's share of the 6,000,000,000-pound U. S. fiber market had dropped to 65 per cent. In 1950, cotton's slice was 68.5 per cent. In 1940 it was 80.6 per cent. In 1920 it was 88.3 per cent. These figures show the impact of the development of synthetic fibers on the cotton industry.

Synthetics generally have taken over the markets that cotton has lost and last year accounted for 26 per cent of the total—as compared with the ten per cent that went to synthetics in 1940. Per capita consumption of cotton in the U. S. has not increased in 36 years. And yet cotton has advantages that none of the synthetic fibers as yet duplicates in a sense of totality.

It is not expected that there should, at least at this time, develop a unanimous or universal agreement, yet it is rather significant that important segments of the cotton farm leadership in recent months have been coming around to the general view that neither the high, rigid price supports nor the flexible pricing system is a permanent answer to the objectives of moving cotton into consumption at higher rates. Naturally, all segments of the raw cotton industry have been pleased and surprised at the unexpectedly high rate of export sales resulting from a competitive export price. As a result the U. S. surplus is being whittled down fast, and with a short acreage this year, plus additional

acreage diverted into the Soil Bank, there is a possibility that the carryover will be further reduced during the next crop year.

Yet while the farm leaders rejoice over this situation, much of their leadership feels it may be only a temporary reprieve; that within two years, provided the present law is continued, there will be a return to a high price support, substantially increased acreage and another surplus problem. This same leadership is aware that while they have developed a pricing program which makes cotton competitive in export markets, they have done nothing to make it more competitive in the home market. Also, they feel Congress will not continue the funds for the high cost of the present program.

Not too long ago it would have been rather in the realm of fantasy to think of all branches of the cotton industry agreeing on the fundamentals of a cotton program designed to serve the best over-all interests of the industry. Now, while much still remains to be accomplished, it is no longer a dimly seen possibility. In general there is steady and mounting progress toward the concept of a one-price system. All that is still somewhat lacking is a final meeting of minds as to the implementation of the objective—which is rather to be expected. Industry leaders are fully aware of the importance of reaching an accord on a minimum set of provisions—and it is to be hoped that such accord will be reached.

The public at large certainly is not oblivious to what might be called the "cotton fiasco." In recent months, one mass circulated periodical after another has been taking sizeable cognizance of the government's pernicious subsidy or control scheme for cotton. They are constantly made more aware of the tragic story. They are aware that after 25 years of the utmost government solicitude, cotton has lost markets everywhere. Its producers have lost freedom. Cottonseed-oil supply is limited and soybean oil is increasingly taking its place. The pity is that the road back is a long, long one. Markets once lost are not easily regained. And all this is not to mention the pretty penny it has cost, and is costing, the U. S. taxpayer.

For instance, in a lead editorial, *Life* magazine, among other things, pointed out recently that instead of letting the cotton industry stand on its own feet, the government has so far lost a total of \$1.7 billion in trying to keep it artificially regulated. There's no denying the fact that if enough people start squawking, something will be done to halt the processes which are bringing the slow destruction of a once flourishing American industry. The squawks are coming, and there is mounting evidence that the time is not too far away when Congress must find a way to end the needless and senseless mess.

The mill industry stands for a one-price system, with the price realistically geared to competitive factors, including foreign-grown cottons and other important competing materials. Its spokesmen concede, however, that obviously price alone will not determine cotton's ability to compete. But without a competitive price, they contend, cotton cannot compete regardless of how favorable all the factors may become.

And it can be cited that two experiences of the past year have demonstrated in an almost sensational manner the influence of price on consumption. First, when the export price was made competitive, foreign sales of American cotton skyrocketed beyond even the most optimistic predic-



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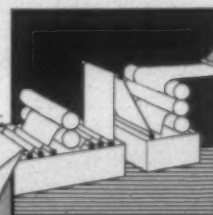
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tions. The second experience involves the impact of price on a domestic market. When far-sighted Western cotton producers and Congress teamed up to make competitive the extra long staple cotton produced in this country, off-take again exceeded the most enthusiastic predictions and the extra long staple producing industry was given a new birth. Mill men have ample justification to believe that a competitive price for all cotton in the domestic market will have just as sensational a result.

Word Gets About In Strange Places

The following matter, by chance, has been brought to our attention and we take note of it for two reasons: (1) it is very doubtful that many textile managerial personnel are numbered among the subscribers to *The Nation*, the "liberal" weekly; and (2) it is something in the "man bites dog" category when such a journal of opinion prints an article about the serious plight of the textile industry, particularly in the South, and does not castigate the industry from one end to the other.

The Nation in a recent issue printed an article by Charlotte's Harry Golden, editor of *The Carolina Israelite*, entitled "Texas, Textiles and Tokyo" which points to the recent rash of cotton mill liquidations, and points also a finger where the real blame lies: the administration's foreign economic policy and the problem of cheap-labor Japanese imports. Accurately, the writer acknowledges that while the industry is sometimes subject to over-production, it has always been a small-profit industry as compared with steel, automobiles, oil and chemicals, and that often the margin between success and failure had depended on the business of a single year.

But what seems to us the most intriguing part of the interesting piece is that which deals with the closing of the Darlington (S. C.) Mfg. Co. The article says that when the owner closed the Darlington plant, he gave as his reason the workers' majority vote in favor of the textile union. This is hardly in keeping with the facts or the record. As we understand it, Roger Milliken may have admitted that unionization could have been one factor in the over-all picture, or something in the nature of a "final straw," but that the real reason for the closing was that the mill simply did not produce anything like a reasonable return on investment, and that from such a standpoint, despite some recent modernization, it simply was hardly worthwhile.

The author of *The Nation* article goes on to say that "other manufacturers, too, have alleged that the 'threat' of unionism has forced them to give up the business, but he notes, too, in the same breath, that 'actually, unionization is the most negligible factor of all in the situation.'" This, in fact, is exactly what Mr. Milliken sought to prove before the National Labor Relations Board hearing. Mr. Golden cites that of the 87 plants closed in the South since Jan. 1, 1953, only 19 had union contracts and only four others were in the process of being "organized." And he comments that "unionization is a pretext, not a reason, for what is happening to the South's textile industry."

In some degree, we would certainly agree with what Mr. Golden has to say. He informs *The Nation's* readership that "of all these factors, the most widely discussed is the disastrous effect on the textile industry of Japanese im-

ports." We do not doubt the sincerity or the integrity of Mr. Golden, who certainly would not pretend to be a textile man or a textile economist; on the other hand, we cannot find ourselves entirely agreeing with all that he has to say. But we must confess, that, basically, he has done what you'd call hit the nail on the head. We are not surprised that Mr. Golden, a Charlottean by adoption, has drawn the conclusion which he has, but we are surprised that a publication in the category of *The Nation* deals so charitably with an industry other publications of the same class have never missed an opportunity to try to drag through the mire.

It is a discerning and not unfair article which Mr. Golden has produced. The fact which impresses us, however, and causes us to comment upon it, is that apparently the economic facts of life with which the U. S. industry for so long has been seeking to present to the American public, to Congress and to the Administration, do seem to get around in some pretty odd corners.

Japanese Sign Laws Again

The State Department and the Eisenhower Administration apparently do not intend to forget those so-called "anti-Jap" laws in South Carolina and Alabama, even though, as has been pointed out in these columns before, there has never been any very serious attempt, or any attempt at all, to enforce these laws. They were hastily enacted, without much debate or forethought, just as the protests over the rising flood of low-cost Japanese textiles entering this country were reaching a sort of crescendo, and in the final analysis about all that the laws amounted to was a gesture.

It is quite understandable, however, that even gestures can be embarrassing to the State Department. Once again, and only very recently, Secretary of States Dulles said that the government hopes the Southern textile states which have enacted the "anti-Japanese textile laws" will see fit to repeal them. In fact, it is disclosed that the situation in respect to these state laws has been discussed recently by President Eisenhower and Prime Minister Kishi of Japan.

The textile industry as such never advocated or sponsored these state laws. The government—with some assists from the textile industry itself, incidentally—can point to the fact that efforts have been successful this year in preventing the spread of similar legislation to other states, and in throwing the damper on even more drastic proposed legislation in one of the Southern textile states. It is made rather plain, however, that the State Department has not given up hope for the repeal of the laws in South Carolina and Alabama.

The whole matter, of course, is a delicate one for the Administration. If too much open pressure of a type should be brought by the Federal government to bring about the repeal of the state laws, it is conceivable that an even more delicate situation might arise.

The government points out that these laws are contradictory to treaty obligations with Japan. In a recent conference, Secretary Dulles went so far to concede that if no attempt was made to enforce the so-called state anti-Jap laws, they could conceivably become just a dead letter. He made it plain at the same time, however, the U. S. government would much prefer to see the states remove the statutes altogether, and that, too, on the part of the government, is understandable.

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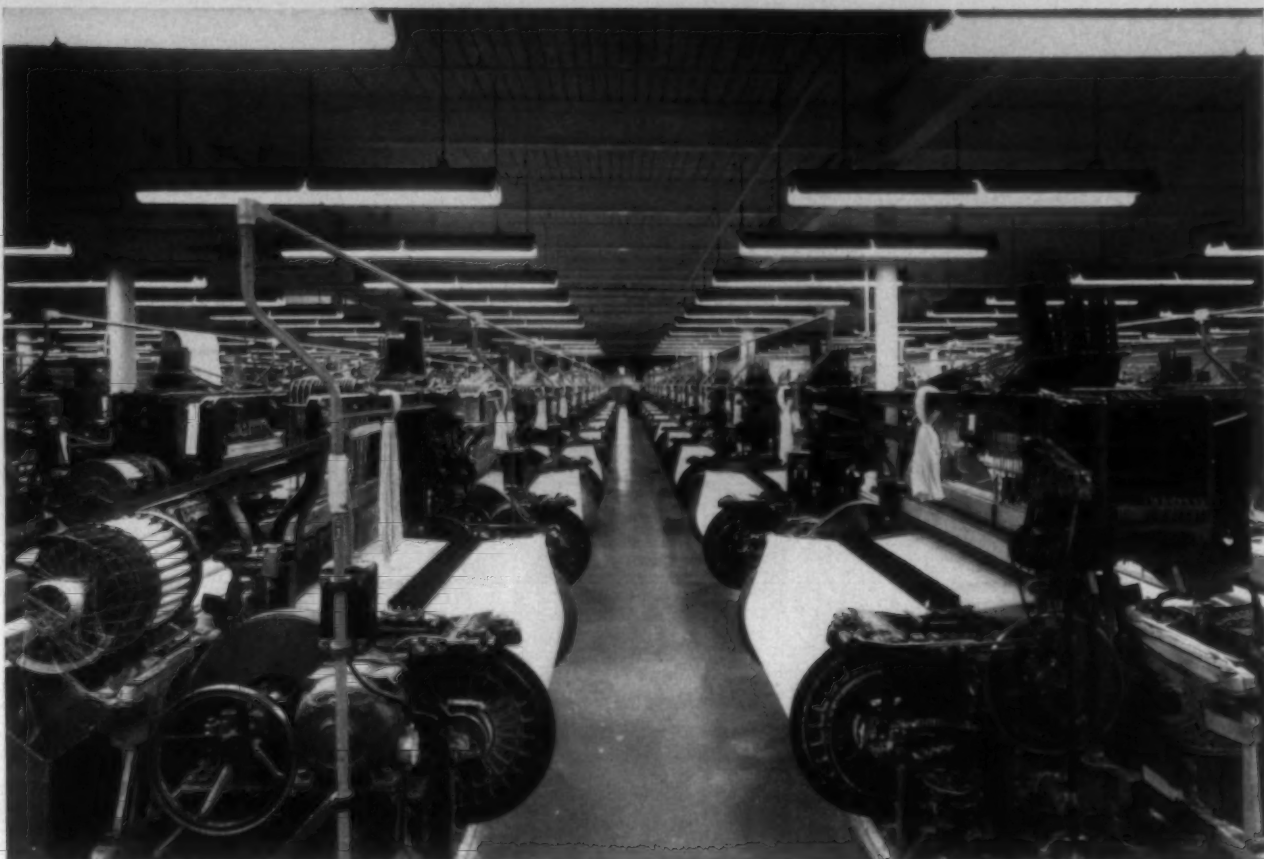
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See Contest Rules on Page 45

Take any piece of new or modernized equipment in your plant and ask yourself the following questions about it. Your answers could easily win a cash prize for you in this journal's new equipment contest.

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How much more efficient have subsequent operations been made?

How much savings have been effected in reducing cleaning time?

These are only a few of the more obvious facts you'll want to dig out in preparation of your answer to the over-all question:

How has the purchase of new equipment or the modernization of existing equipment improved my operation?

BY WAY OF EXAMPLE, suppose that your mill recently installed XYZ drawing frames, replacing 1920 Model ABC frames. At the time this installation was made, the finisher frames were equipped with 18x42-inch cans holding approximately 45 pounds of stock as compared with the smaller cans which held 11 to 12 pounds. Now to put together a story, answer these questions:

(1) How much faster is the front roll speed on the XYZ frames? What additional feet per minute is delivered from the new frames? Compare this delivery rate with the old rate produced on the ABC frames.

(2) How has maintenance cost on the frames been

affected? The maintenance cost should be described on a per pound basis.

(3) How has the labor cost been affected by the new frames? If jobs have been eliminated, what do these savings mean on a yearly basis? If the number of jobs remain the same and production rates are boosted as a result of the new equipment there is an attendant reduction in cost per pound. What is this reduction? What does it amount to on an annual basis? Compare labor costs between the ABC and XYZ frames.

(4) What quality improvements are seen in the drawing sliver which results from the XYZ draw frame's drafting

element? Be as specific as possible mentioning the sliver's uniformity as it is rated by whatever quality testing devices that are available. What is the grade of the stock and the weight of the sliver run on these draw frames?

(5) How is the efficiency of the XYZ frames as compared with the ABC frames? What is the doff cycle on the finisher frames which have the 18x42-inch cans? How many coils per layer are being put in the 18x42-inch cans? How many actual pounds are being put into the 18x42-inch cans? What does this mean to the frame tender? How are the big cans being handled from drawing to roving?

(6) What does the use of the 18x42-inch finisher drawing can mean in terms of increased efficiency on the roving frames? The lengthened creeling time saved on roving frames amounts to what, if any, job load changes on these

frames? How long did the small cans run in the creels behind the roving frames?

(7) What savings were made in reduced cleaning time on the new XYZ frames as compared with the old ABC models?

(8) Answer any questions which you think might be of interest to another mill man in regard to the operation of the new equipment.

This outline is intended to be a guide which may be followed in developing a story for entry in the contest. Strict adherence to this outline does not guarantee winning, but the stories that do win will contain these facts and probably more operating details.

Remember, it is easy to do; the prizes are big and numerous; and every entrant will be presented a five-year subscription to *TEXTILE BULLETIN* and a free copy of the current edition of *Clark's Directory of Southern Textile Mills*.

A Report Of:

The 49th Anniversary Convention of the Southern Textile Association

Politics, cotton and competition shared the spotlight at the annual convention last month of the Southern Textile Association. Now in its Golden Anniversary Year, the association has shown marked growth and increased activity in recent years.

SOME 700 mill men, suppliers and their wives attended the 49th anniversary convention of the Southern Textile Association June 20-22 at the Ocean Forest Hotel, Myrtle Beach, S. C. Highlighting the meeting were keynote addresses by William E. Reid, president of the Riegel Textile Corp.; Robert C. Jackson, executive vice-president of the American Cotton Manufacturers Institute, and the Honorable William Jennings Bryan Dorn, Congressman from South Carolina's Third District.

Election Of Officers

In an election of officers at the closing business session, Horace Pennington of Cone Mills Corp., Greensboro, N. C., was named president for the association's upcoming

Golden Anniversary year. He succeeds William M. Pittendreigh of Riegel Textile Corp., who was named chairman of the board of governors. The new president has been active in the S.T.A. for many years, having served as a member of the board of governors and as a member of that group's executive committee.

Elevated from second to first vice-presidency was Walter D. Vincent of Dan River Mills, Danville, Va. According to custom, this places Mr. Vincent in line for the presidency next year. Named second vice-president was Joe N. Jenkins of The Kendall Co., Pelzer, S. C. Mr. Jenkins is immediate past chairman of the association's South Carolina Division, an office he held for two years.

Board Of Governors

By virtue of an amendment to the S.T.A. constitution and by-laws which was unanimously adopted at the convention's opening business session, the association's board of governors was increased in membership from 12 to 16. Named to serve three-year terms expiring in 1960 were Troy H. Carter, Woodside Mills, Greenville, S. C.; J. T. Chalmers, Orr Mills, Anderson, S. C.; Joe Gilbert, Hart Cotton Mills, Tarboro, N. C.; and Nelson W. Kessell, P. H. Hanes Knitting Co., Hanes, N. C.

Elected to four-year terms expiring in 1961 were Rodger Hughes, Reeves Bros., Spartanburg, S. C.; R. Carter Heary, J. P. Stevens & Co., Piedmont, S. C.; Jesse Boyce, Erwin Mills Inc., Durham, N. C.; and J. W. Inscoe, Carolina Mills Inc., Maiden, N. C. Messrs. Hughes and Boyce this year finished interim terms on the board, both having been named to one-year appointments last year.

Continuing members of the board (with terms expiring



W. E. Reid



Robert C. Jackson



W. J. B. Dorn

in 1958) are Joseph H. Chalmers, Greenwood Mills, Greenwood, S. C.; Herman Cone Jr., Cone Mills Corp., Greensboro, N. C.; R. M. McCrary, Carolinian Mills Inc., High Shoals, N. C.; L. W. Thompson, Riverdale Mills, Enoree, S. C. Members with terms expiring in 1959 are M. L. Brackett, Highland Park Mfg. Co., Charlotte, N. C.; L. A. Crawford, Joanna Cotton Mills Co., Joanna, S. C.; J. C. Farmer, Henderson Cotton Mills, Henderson, N. C.; and D. H. Roberts, Lydia Cotton Mills, Clinton, S. C. Ex-officio members of the board include divisional chairmen and all past S.T.A. presidents.

Social Activities

Social activities at the convention included an 18-hole Calloway System golf tournament Friday afternoon for the men and a nine-hole golf tournament for the ladies; a bingo game Thursday evening, June 20; and professional entertainment on Friday evening, June 21. The associate members division of the association provided social hours on Thursday and Friday, as well as providing prizes for the golf tournaments, and procuring and staging the Friday evening floor show. A list of those firms contributing to the entertainment and prize fund follows.

Abbott Machine Co.; Abington Textile Machinery Co.; Acme Steel Co.; Adams Inc.; Aldrich Machine Works; Allis-Chalmers Mfg. Co.; American Moistening Co.; American Viscose Corp.; *America's Textile Reporter*; Anheuser-Busch Inc.; Armstrong Cork Co.; Ashworth Bros. Inc.; Atkinson, Haserick & Co.; Atlanta Belting Co.; Atlanta Brush Co.; Bahan Textile Machinery Co.; The Bahnsen Co.; Barber-Colman Co.; Barber Mfg. Co.; Becco Sales Corp.; Blackman-Uhler Co. Inc.; Bowen-Hunter Bobbin Co.

Byrant Electric Repair Co.; The Bullard Clark Co., E. H. Jacobs Northern Division; H. W. Butterworth & Sons Co.; Carolina Belting Co.; Carolina Loom Reed Co.; Carolina Specialty Co.; Carolina Supply Co.; A. B. Carter Inc.; Celanese Corp. of America; Clinton Corn Processing Co.; Cocker Machine & Foundry Co.; Corn Products Sales Co.; Crompton & Knowles Corp.; D & S Engineering Co.; *Daily News Record*; Dary Ring Traveler Co.; Dayton Rubber Co.; Dillard Paper Co.; W. D. Dodenhoff Co., a division of James Hunter Machine Co.; Draper Corp.

Duke Power Co.; E. I. du Pont de Nemours & Co. Inc., finishes division; E. I. du Pont de Nemours & Co. Inc., dyes and chemicals division; Engineered Plastics Inc.; Field Loom Reed Co.; Fisher Mfg. Co.; Foster Machine Co.; Gastonia Belting & Supply Co. Inc.; Gastonia Textile Sheet Metal Works; The Gates Rubber Co.; The Goodyear Tire & Rubber Co., Industrial Products Division; Greenville Loom Reed Co.; Greenville Textile Supply Co.; Ira L. Griffin & Sons; Grinnell Co.; Gulf Oil Corp.; Hollister-Moreland Co. Inc.; Howard Bros. Mfg. Co.

Huntington & Guerry Electric Co.; Industrial Supply Co.; Jenkins Metal Shops Inc.; Kever Starch Co.; Kluttz Machine & Foundry Co.; H. F. Livermore Corp.; Lockwood Greene Engineers Inc.; Ralph E. Loper Co.; Meadows Mfg. Co.; Moretex Chemical Products Inc.; New York & New Jersey Lubricant Co.; Frank G. North Inc.; Odell Mill Supply Co.; Olney Paint Co.; Parks-Cramer Co.; Penick & Ford Ltd. Inc.; Pneumafil Corp.; Pure Oil Co.

Ragan Ring Co.; Reliance Electric & Mfg. Co.; J. E. Rhoads & Sons Co.; Robert & Co. Associates; Saco-Lowell



W. M. PITTENDREIGH

Shops; Schachner Leather & Belting Co.; Seydel-Woolley & Co.; Schmidt Mfg. Co. of South Carolina; Shelby Supply Co.; Sherwin-Williams Co.; Sinclair Refining Co.; Slip-Not Belting Corp.; E. E. Smith & Son; Sonoco Products Co.; Southern Belting Co.; Southern Shuttle Division, Steel Heddle Mfg. Co.; The Staley Sales Corp.; The Stanley Works; Stein, Hall & Co.; The Stodghill Co.; Sykes Inc.; Taylor Instrument Cos.; The Terrell Machine Co. Inc.; Texize Chemicals Inc.; *Textile Age*.

Textile Apron Co.; *Textile Bulletin*; *Textile Industries*; The Textile Shops; Textile Mill Supply Co.; Textile Specialty Co.; *Textile World*; Thackston & Redding Inc.; Universal Winding Co.; Veeder-Root Inc.; Victor Ring Traveler Co. Division of Saco-Lowell Shops; WAK Industries; Watson & Desmond; Werner Textile Consultants; Westinghouse Electric Corp.; West Point Foundry & Machine Co.; Whitin Machine Works; Whitinsville Spinning Ring Co.; Wrenn Bros.; Yale & Towne Mfg. Co.; Yeoman's Textile Machinery Co. Inc.

Associate Member Elections

In an election of officers for the associate members division of the association, George Batchelor of Odell Mill Supply Co., Greensboro, N. C., was named council chairman to succeed Herbert Norton of the Du Pont Co., Atlanta, Ga. Succeeding Mr. Batchelor as division chairman is Charles Switzer of the Kever Starch Co., Greenville, S. C. Richard Dunn, Whitin Machine Works, Spartanburg, S. C., was named divisional vice-chairman to succeed Mr. Switzer. Re-elected secretary of the division was Junius M. Smith, Clark Publishing Co., Charlotte.

The associate members division also elected five new



George Batchelor



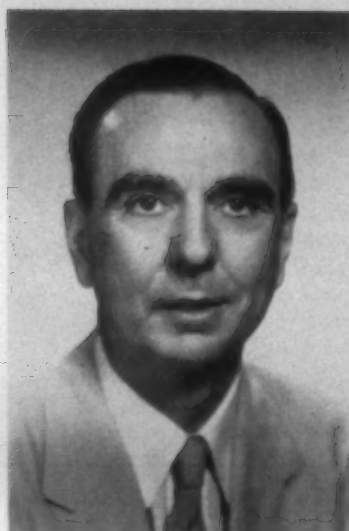
Charles Switzer



Junius M. Smith



HORACE PENNINGTON



WALTER VINCENT



JOE N. JENKINS

members to its council. Named to serve two-year terms expiring in 1959 were Frank Barrie, Universal Winding Co., Charlotte; Haines Gregg, Carter Traveler Co., Gastonia, N. C.; Glenn Fisher, Fisher Mfg. Co., Hartwell, Ga.; Carl Chalmers, Texize Chemicals, Greenville, S. C.; and A. E. Johnston, Ashworth Bros., Greenville, S. C.

Continuing members of the council include Walter Coker, Armstrong Cork Co., Greenville, S. C.; L. L. Froneberger, The Bullard Clark Co., Greensboro, N. C.; I. L. Dowdee, National Starch Co., Charlotte; R. W. Butler, Barber-Colman Co., Greenville, S. C.; and G. W. Burkhalter, Gulf Oil Corp., Atlanta.

Men's Golf Tournament

In the men's 18-hole Calloway System golf tournament held at the Dunes Club, Melvin E. Seals, Carlton Yarn Mills, Cherryville, N. C., won members' low gross honors with a 78. Placing second and third in the low gross field, respectively, were Caldwell Ragan Jr., Trenton Cotton Mills, Statesville, N. C., and J. E. Neely, Republic Cotton Mills, Great Falls, S. C. Both had scores of 83, with Mr. Ragan taking second honors on best hole. A special high gross prize among members went to John R. Stephens, J. P. Stevens & Co. Inc., Rock Hill, S. C., for his score of 118.

Members' low net honors went to D. H. Roberts of Lydia Cotton Mills, Clinton, S. C., who posted a 128-73-55. Placing second and third low net, respectively, were Frank Starling, Cone Mills Corp., Greensboro, N. C., 129-68-61, and J. A. Chapman Jr., Inman Mills, Inman, S. C., 106-42-64.

Winning low gross honors in the associate members' division was Charlie Kelley, Borne Chemical Co., Charlotte, with a 75. Robert V. Lee Jr. of West Point Foundry & Machine Co., Concord, N. C., took second low gross honors with a 75; and Stan Halliday of the Draper Corp., Spartanburg, S. C., placed third with an 82. Eddie Harrison, Seydel-Woolley & Co., Greensboro, N. C., won high gross honors with a score of 172.

Ed Cansler, Saco-Lowell Shops, Charlotte, won associate members' low net honors with a round of 124-67-57. Randy Taylor of *America's Textile Reporter*, Greenville, S. C., was runner-up in the low net field with a 128-70-58, fol-

lowed by Joe Hunter, American Viscose Corp., Charlotte, with a 129-69-60. Jim McQueen of Janitors Supply & Chemical Co., Greenville, S. C., won a special prize for a hole-in-one during tournament play.

Bill Terrell, The Terrell Machine Co. Inc., Charlotte, acted as tournament chairman, and announced the winners at the convention's closing business session on Saturday morning, June 22.

Women's Golf Tournament

Mrs. E. T. Cansler, whose husband won low net honors in the associate members' field, took low gross honors in the women's nine-hole tournament played at the Pine Lakes Country Club. Mrs. Cansler posted a 50. Taking second low gross honors was Mrs. Stan Halliday with a 51. Her husband also went home a winner in the men's tourney—placing third in the associate members' low gross field.

Mrs. Grace McCrary and Mrs. Ona Rau placed first and second, respectively, in the low net scoring. Both scored 36s, with best hole determining Mrs. McCrary the champ. A special prize for high gross score among the ladies went to Mrs. Jane Guill.

Mrs. Rau and Mrs. Bill Terrell handled arrangements for the ladies' play.

Competition From Where?

By W. E. REID, President, Riegel Textile Corp.

The following is a transcript of the paper presented by Mr. Reid at the 49th anniversary convention of the Southern Textile Association. Mr. Reid was a featured speaker at the convention's opening business session on Friday morning, June 21.

IN the textile industry we pride ourselves on our rugged spirit of competition; yet, I am sure there can be no constructive pride in the fact that while the wholesale price



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index of other industrial commodities has advanced 25 per cent during the past eight years the textile price index has dropped four per cent; coming, mind you, in a period of constant rising costs. You have made a valiant effort to maintain and improve your competitive cost position. It is discouraging that in spite of these efforts the return to the textile industry remains at such a low level that the satisfactory operation of our industry is in grave jeopardy if our profits cannot be improved.

Competition besets us on many fronts; however, I would like to confine my comments to five phases of our competition. These are: (1) competition from within our industry; (2) competition from other industries; (3) competition from foreign sources; (4) competition from other industries for employees; and (5) competition from other industries for management.

The form of competition that is constantly hammered at you, as operating management, is our first phase, *competition from within the industry*, competition with each other. Let's wash our dirty linen in the beginning and get it behind us. We have shown very little concern in our industry for the size of the watermelon that we have to divide, but have shown much concern about the size of the slice that we could get for our company. It is only natural when sales begin to fall off, inventories to climb and running schedules to be reduced, to fight with each other for a bigger share of the melon.

How many times has your sales department asked you the question, "How can Company X sell its goods at 20 cents a yard, when our cost is 20½ cents?" How many times have you had the courage to say, "Let Company X have it." Don't you say most of the time, "If they can sell at that price so can we?"

Last week I had lunch with the sales manager of a company in a competing industry and when I asked the usual, "How's business?", I was amazed to get the answer, "It is so good I am worried that we are booking more than our share of a certain product. Normally, we sell about 27 per cent of this item and the last month's figures from our association show us to be getting 33 per cent. I know our competition cannot afford to lose that high a per cent of their sales and the next thing that will take place is price cutting and chaos."

Can you imagine that type of thinking taking place in our industry? We are each other's biggest competitors. You are so familiar with our internal competition that I need only to call it to your attention. But remember, while we are scrapping among ourselves, other industries, who are doing a real job of market and technical research, are beating us to the customers. And this leads us into the second phase of our "Competition from Where?"

Competition from other industries is three pronged. First are those competing directly for our markets. Let's cite one or two. The paper industry is a very important competitor. Between the years 1948 to 1956, the consumption of paper in bags has gone from 1.1 to 1.7 billion pounds. Our company used to be in the handkerchief business, making four million dozen a year; now we do not make a dozen. In fact, the use of cotton in ladies' handkerchiefs has dropped from 17,000 bales in 1940 to 4,000 bales in 1955.

The battle lines are being drawn between the textile and paper industries on non-woven fabrics. What is it going

to be? A fabric made by the dry or textile method, or by the wet or paper method? Many of you saw on television this last Winter the new paper dresses. The women of America don't like to wash and iron. Visualize for a moment what would happen to our markets if a satisfactory disposable paper dress was developed.

Another market of ours that the paper industry has made terrific inroads into is the napkin business. I am sure if I asked any of you if you liked to use paper napkins you would say no; nevertheless, you use them regularly. The plastics industry accounts for another large slice of our markets, much of which goes into shower curtains, house curtains and draperies, raincoats and automobile and furniture upholstery, only to mention a few.

B. J. C. vander Hoeven, vice-president and general manager of the Chemical Division of Koppers Co. Inc., in an address to the Commercial Chemical Development Association on March 28, 1957, under the subject "The Raw Material Supplier" had some interesting things to say and I quote:

"My company is vitally interested in the plastics industry. More than one-third of the sales of our chemical division are to this industry and we believe this will increase substantially as our new facilities come on stream.

"The plastics industry has mushroomed to a two-million-ton industry with an estimated value of products of over two billion dollars and with a consumption of plastics reaching 24 pounds per capita.

"It is truly an amazing industry. It has been setting the pace in the chemical industry of which it is the most significant single part. The rate of increase of the plastics industry during the last decade has been four times that of all manufacturing industries, compared to a twofold increase for the chemical industry.

"This rapid growth is expected to continue. Estimates indicate that it may reach a six-billion-pound level by 1960, and that per-capita consumption may go to 32 to 35 pounds."

Ask yourself the question, "Where is this additional capacity of the plastics industry going to find a home?" Competition for our markets is going to increase.

The second prong of our competition from other industries has been brought about by the broad changes in the way our population lives and works; technological changes, changes in our economy. Let's call these a conglomeration of "outside" competitors. Better heating, centrally-heated homes, heated cars, heated factories have offset the need for a great deal of clothing, from long underwear to overcoats.

There have been other innovations which reduce the need for a textile product. Think, for example, of the dish towel and the electric dishwasher. The whole national trend to mechanization, reducing the need for manual labor especially outdoors, has profoundly affected the need for heavy clothing. We are in the work glove business and look what the corn-husking machine has done to us; a good husker used to wear out eight to ten pairs of gloves a day. We would not have thought of entering the husking season with less than 350,000 dozen in inventory—now the entire glove industry's production is less than half this quantity.

The third prong of competition from other industries can best be summarized by the familiar phrase, "The battle for the consumer dollar." In this area of competition the textile industry is losing ground steadily. From 1929 to 1955, there have been radical changes in the spending of disposable income. Listen to a few: food and tobacco up 20 per cent; household appliances up 60 per cent; auto-

mobiles up 73 per cent. Now our tale of woe: clothing and accessories down 32 per cent.

It is no longer a question of whether a family is going to have one car; now they have a rough time getting along without two. Look at the housetops—on every one a television aerial. A man is considered a slave driver if he even thought of his wife being without an automatic washing machine, a dishwasher, a deep freeze, a new model stove that does everything but unwrap the frozen food. Then there are vacuum sweepers with no stoop, no squat and no strain.

Turn on your radio, or better still, your television, and learn to know this important phase of your competition. If you really want your eyes opened to your competition for the consumer's dollar, walk through a modern super market or drug store. You find a little food and a few drugs and everything else that you can think of and a lot of things that you never would have thought of.

One of the distressing things you will see is the increase in foreign-made products being offered for sale. This brings us to the problem that we are all so concerned over, *competition from foreign sources*.

During the past few years, there has been a tremendous shift in textile imports and exports. We have watched cotton become a controlled political football. For those of you who have not read the editorial in *Life* magazine of May 20 on "King Cotton," I earnestly urge that you do so. One of the subheadings states, and I quote, "Our government's farm madness pays a successful industry to wreck itself." This is a damning statement, but we in the textile business know, a truthful one. It is apparent that the farmers of the U. S. are far ahead of our congressional leaders in this recognition of the terrific competitive problem of cotton. Our cotton-pricing policy of holding an umbrella over synthetics and foreign-grown cotton is strangling the use of American cotton.

Over the last five years, our population has increased nine per cent, disposable income 28 per cent, and cotton consumption has decreased 11 per cent. No industry or farm commodity can survive if it is priced out of a market. The thought of a two-price cotton system makes us shiver in the expectation of the calamity that will befall us as an industry. We are afflicted today with a State Department

with no domestic clients. A group of long-haired thinkers more interested in the welfare of the low-wage, under-privileged nations of the world than in the preservation of the textile industry's vital place in the American economy and defense. Look at what is happening—goods pouring in from Japan, imports stepping up from Hong Kong, our velveteen industry wrecked by Japanese and Italian imports, a steady increase in the number of garments that use more of the low-wage countries' labor, less of ours, and drastically affects our customers. We are now watching the beginning of a publicity campaign started by the Japanese and encouraged by the State Department telling of the unhappiness over the present quota situation. F. E. Grier, past president of the A.C.M.I., rendered a great service to us all by his leadership in the establishment of this quota. You will see, in the next few months, a concentrated effort by the Japanese and our State Department to loosen these quota restrictions.

Let no one confuse you, the industry's battle for its salvation and its customers' salvation from the influx of foreign imports is far from being over. Continuous vigilance, work and co-operation are needed to hold this in check. Do not become lulled into a state of indifference on this important phase of "Competition from Where?"

The last decade has seen the fourth phase, *competition from other industries for employees*, really get under full steam. This is a vital aspect of our competitive situation as it involves our employees. Other industries have recognized the efficiency, attitude and character of Southern people.

We as an industry for many years had first call on these Southern people entering the working force. Today you need only to look around your communities and see the industries that are competing with you for these people. There is scarcely a small town or even a crossroad community today that does not have a non-textile industry of some type. You cannot drive through the Southeast without this point being driven home to you. Every state has its planning or industrial board. Every village and town its chamber of commerce striving and competing with each other for all forms of industry—each wanting and getting diversification as a hedge against a "one-industry area."

This is a great thing for the economic growth of the South. It is a goal we must all approve and work toward, but, as this expansion in industrialization takes place, the

S. J. A. Golfers



L. J. Stanley, Meadows Mfg. Co.; Karl Inderfurth, Karl H. Inderfurth Co.; Hayden Cobb; J. L. Waldin—Roy Davis; Edward Byrd, Allison-Erwin Co.—H. A. Clark, Borne Chemical Co.; C. G. Kelley, Borne Chemical; P. S. Leach, Bates Industries; L. L. Froneberger, The Bullard Clark Co.

competition for the available employees becomes keener and keener. The textile industry must continue to keep pace with competing industries in our area in terms of wages, working conditions and, most important of all, stability of employment and the furnishing of opportunities.

Along with the increasing competition for employees it was only natural for the most serious phase to develop, *competition from other industries for management*. Year by year, we are hearing more cries of distress from our industry regarding the competition that we are facing in the securing of young men for our future management pool.

The textile industry is an old, established industry; tried, proven and necessary; but, unfortunately, lacking in the glamour of many new industries such as electronics, chemicals, plastics, aviation and guided missiles, to mention only a few. This is being reflected in a poor enrollment in textile schools throughout the United States. It is also reflected in the small number of non-textile school graduates who are seeking employment in our industry; or who, to express it better, we are able to attract.

Twenty-five years ago in Myrtle Beach, an energetic, ambitious young man wanting to go into industry would not have had many choices. He either moved toward the Piedmont area into the textile business, or to Birmingham, Ala., to the steel mills. Now, there are many other available industries nearby—Riegel Paper in Wilmington, International Paper in Georgetown, and Celanese in Rock Hill, to mention only a few. These people are competing with us for future management.

Let us reluctantly admit that the textile industry is not an industry that is known and recognized as providing good management training. The most critical period in the life of a corporation is when it is passing from the founder management into successor management. Many of our Southern textile corporations are at this point. This is not only true of our industry, but of many other corporations. A good illustration of the difficulty of this transition is the problems the Ford Motor Co. encountered at this point in its corporate life.

The only answer to this problem lies in the feeding in at the bottom of good, well-selected young men of management caliber. Believe me, the competition from all industries in the management recruiting field is fierce. Industry has recognized that you cannot improve by training what you fail to do by selection.

We have touched briefly on competition from within our industry, other industries, foreign sources, other industries for employees and other industries for management. Your immediate reaction is, "What can I as a superintendent or overseer of a textile operation do about it?" Having been brought up in a competitive environment, you *expect* a competitive environment, and let me say here that textiles *should* be competitive. In a healthy, expanding economy, food, lodging, clothing and services such as electricity, water and heat must be competitive. There are things that we can do in all phases of textile management to meet these various competitive forces. Let's look at a few.

First, since a large part of our competition comes from within our industry and since this is competitive air we breathe, it is the hardest one for us to do something about. By nature and necessity we have been trained to be distrustful of each other. The point has been reached where we must be willing to give leadership and, in many instances, to follow leadership, in a more co-operative effort

to expand our over-all markets. Associations such as this go a long way toward fostering the proper spirit of co-operation within the industry.

We must be interested in the welfare of competitive mills, as a sick member of the industry unfortunately reacts against us all. We must, all together, strive to increase our over-all markets, thereby assuring each of us a larger individual share. We must, at the manufacturing level, be more co-operative with the demands and pressures placed upon us by our sales department. It's hard to be sympathetic when it seems that they can sell everything that we haven't got or aren't making, but we must realize that they too are under tremendous pressures. We must avoid looking at our customers as an opponent to fence with, but rather as an ally to better profits and better volume.

If we as an industry will do a better job of service, style and the maintaining of high quality standards, regardless of the cost pressure brought upon us, we will go a long way toward maintaining and improving our competitive position.

Second, as competition from other industries increases it is good to know that our industry is solidifying and moving into stronger hands. The rugged individualism is passing out. We are approaching a better balance between production and consumption. Our sales forces are geared to a competitive market. We have been forced to keep our costs in better condition. We know we cannot continue as the low industry on the profit totem pole. We have a real sense of urgency.

Some in the industry feel that we have been giving up too easily in our battle with the paper, plastic film and other industries. We must make better use of our brains in the recapturing of our markets. We must become more research minded—new fabrics, new finishes and new products. There are many lessons that we can take from the merchandising and selling of other products in our battle for the consumer's dollar. Take a look at the annual model concept of the automobile. This is the theme on which their success has been built. We must create in all textile products the style fatality rate that has been established in ladies' dresses. If we could create in all of our customers the same demanding desire for style change that seems to be an inherent quality in the women of America, we would be well on our way down the road of increased consumption.

We have more to offer in the way of better styles, better fabrics, good blends and better minimum-care finishes than ever before. We have plenty to do the job with; it's simply a matter of all of us, from production through sales, doing the job.

As we have seen, competition within our industry and competition from other industries are the two sides of the coin. They aren't quite the same, but they do have a common denominator. When we look at the third point, competition from foreign sources, our sights have to change and we are required to fashion and to learn to use new kinds of competitive tools.

Let me quickly say that in meeting competition from foreign sources, you are in a hopeless position from the standpoint of labor cost. Last week we saw some figures on textile labor cost in India—something over \$6 per month, plus \$14 for keep, or less than \$21, mind you, for a month. You know the Japanese labor situation. It makes my blood boil to see our hard-earned profits being taken in the form

of taxes to support a cotton program that encourages surplus growth, distress foreign sales, and causes, worst of all, finished products to come back into this country at far below our attainable cost.

We can get our story across to our people, our friends and the public-at-large and get their support in the election of intelligent leaders in greater numbers for our congress, men who will recognize the hopelessness of the situation and have the wisdom and courage to do something about it. Men willing to face cold, hard facts. We need realists, not theorists, in government. We can support our state and national textile associations in their leadership of our cause.

You do have some advantages—think of the time lag on style. We must be quick to latch onto new ideas; willing to make changes in order to keep ahead of nations far removed from us physically. We must build in our products, from their inception to their completion, a quality that cannot be attained elsewhere. We must continue to build and enhance the confidence that our customers have in us and our products. *But*, gentlemen, never forget that the real answer to this competition lies in our seeing that our government is brought to its senses.

Let me turn now to our fourth area—competition from other industries for employees. In meeting the competitive pressure, you are the vital factor. There is no one who can face this phase of our competition as effectively as you. In fact, you are the ones who must attract new employees. To your employees, you are the company.

Your first consideration should be to give dignity to your employees, giving them the full right to be treated as a unique individual with legitimate and worthy ambitions and aspirations. You must handle complaints and grievances promptly and fairly so as to reflect well not only on you and your company, but also on your industry. You must instill in your people the basic thought that there is no monopoly on ideas. You must accept—I should say welcome—ideas and give proper credit to your employees.

No one is happy without a feeling of acceptance, of belonging and of making a contribution. You can create a climate which will give people this opportunity to breathe freely, comfortably and with a sense of personal validity. In short, we must meet the competition from other industries for employees by establishing and maintaining sound personnel policies and then seeing that they are equitably administered by competent supervision.

Finally, let's look at the other side of the competitive coin—competition for management. In the position that you hold with your company, you have been given great authority. You have willingly assumed this authority, but with it has gone a tremendous responsibility. The most important obligation you have to your company and your employees is the building of a management organization. No one in your company can make the contribution in this area that you can make. I realize only too well that your first reaction to the building of an organization oftentimes is, "Let's not go outside and try to attract college boys to our company, paying them higher salaries than many of us made in similar supervisory positions. They should be willing to start the way we did, at the bottom, and fight their way up with no preferred treatment."

You cannot buck the tide. The complexities of business today call for good, capable management. In order to secure this you must look at every source available to you—colleges, high schools and, most important of all, to your

employees. We must remember that in this competitive market for management every source must be given attention, care and study.

I am sure that each of you will agree with me that the best training a young man can possibly get is to be working for a good supervisor. We can talk all we like about every type of training program from in-plant training to the college courses that are offered on management, but nothing can replace the job that we must do in our every-day dealings with the potential management employees. We accepted the authority given to us when we became part of management and we must not shirk our greatest responsibility of seeing that we train good management to replace us. Statistics show that few industries offer better opportunities and awards than ours—be proud of the fact. Good management in a company is contagious and we must do our part toward spreading it throughout our industry.

We have discussed our competitive difficulties and their sources. You and I know, however, that difficulties also create opportunities. I am confident you will rise to the challenge.

The President's Report

By W. M. PITTENDREIGH

Mr. Pittendreigh, in his remarks as retiring president of the Southern Textile Association, denounced the negative approach taken in the past by the industry toward basic research and development.

AT the close of this business session today, our association begins its 50th year of existence, so that when we convene in Asheville in June of next year, we will be celebrating our Golden Anniversary. Our association dates back to the early Summer of 1908, when a group of overseers at Spray, N. C., organized the Spray Textile Overseers Association. At a called meeting held in Charlotte in August of that year, other overseers of the state were invited with the idea of promoting an "Overseers Union."

Through the efforts of the late David Clark, it was shown that this purpose would not be for the best interest



As a token of appreciation for services to the Southern Textile Association, the Pittendreichs were presented two silver candelabra at the closing session of last month's convention.

of the industry and it was decided to change it to the "Education and Development of Practical Men in Southern Mills." J. A. Dean was elected the first president and through the years a number of well known men have served you in this office. But the association has David Clark to thank for holding it together during the lean depression years and the busy war years. Not only was the purpose changed, but the association allowed superintendents to be admitted to membership and changed the name to the Southern Textile Association and throughout our history, a new president has been elected each year.

The history of the association indicates that the first big boost by top management was given by Cesar Cone in 1912. According to Marshall Dilling, our association early in 1915 started the idea of the Southern Textile Exhibition which is held alternate years in Greenville and it was through this association that the first textile exhibition was held in the warehouse of the Northern Piedmont Railroad Co., it being such a success that plans were immediately made to put it on a permanent basis. The association together with citizens of Greenville worked toward having a corporation established to provide the facilities that would be suitable and adequate to house the exhibition. In 1918, construction on Textile Hall began and the second exhibition was held in this building before it was completed. The results are well known to all of us. This exhibition and this building have promoted growth and untold benefit to the industry and to the South.

In 1919, Gordon Cobb, then president of the S.T.A., established our divisional meetings with the emphasis on problems of practical mill men. With the response to these divisional meetings, our annual meeting was reduced to one which is now our annual convention. During the war years of 1941-1945 the press of business and travel on ration stamps caused a limited amount of activity in our association. The manner in which we bounced back from this period gives much evidence of the industry's need for our association.

I am grateful for the opportunity of serving you in this 49th year and to report to you that it has been the best attended year in our divisional meetings. Your divisional chairmen—Joe Jenkins, Bill Rhinehardt, Charles Ward and C. S. Willard—along with their associates, have done

a tremendous job in arranging programs of interest. It is pleasing to note that this year we have arrived at the one thousand mark in our membership. As to the best figures available, we had some 1,800 participating in the eight divisional meetings which were conducted. Never before have meetings been so well attended and never before has there been the enthusiasm for the work which this association is doing.

Developments In Research

For your consideration, will you think with me a moment, on our attitude toward new developments in research. I am afraid that we as superintendents and overseers create a lot of our problems and fail to solve others by the "if it works" attitude. Is this "if it works" attitude holding back new ideas and new developments? Does this attitude retard the bringing about of solutions of operational problems? Is this another reason for our having an unhealthy industry from the profit standpoint? It is necessary that we change this "if it works" attitude to one of "What can I do to make it work?" The textile industry is recognized as one of the oldest industries of man. But as to textile research, we have not even dented the surface. Our hit or miss way of operating by taking the unknown characteristics of the cotton and processing them is bound to bring about varying conclusions.

The chemical industry has laws governing the combination of chemicals which will bring about certain end products. The steel industry, through analysis, can blend ores for a specified steel, but the textile industry with its limited knowledge of its raw material causes one to wonder how we do it. It has not been more than 15 years since the textile industry met this problem face to face and started doing basic fiber research and began to analyze the multitude of fiber characteristics in its relationship to the running qualities and the characteristics of the finished cloth.

Micronaire

Knowledge of these characteristics to date is limited but there has been some measurement developed by researchers with reference to some of these fiber characteristics. One of the first brought forth that can now be measured is the fineness of the cotton fiber and we speak of it as

S. T. A. Golfers



E. B. Powell, Calvine Mills; Charles Switzer, Keever Starch; J. B. Powell, Lumber River Mills; Robert Guill, Keever Starch—Fred Taylor, Barber-Colman Co.; Bill Aiken, Seminole Mills; Bob Butler, Barber-Colman; Dick Peacock, Sonoco Products Co.—Henry Goodwin, Steel Heddle Mfg. Co.; Stan Halliday, Draper Corp.; Charles Turpie, Stanley Steel; Bob McCrary, Carolinian Mills Inc.

Micronaire. Beyond the shadow of a doubt, it has been proven that this characteristic can affect the dyeability and running qualities.

Where does industry stand on using this information? There are mills today not using this tool. Why is this true? Some say they have operated all these years without it, why adopt it now? Consequently they close their minds to the subject. Others have tried it and have discontinued it. Still others have found it to be most helpful. Could it be that the mills who tried it and found it of no value were using this tool incorrectly? Bear in mind, if you please, one uses a pipe wrench on a pipe and not a monkey wrench.

Suppose we as an industry would throw off this passive attitude toward Micronaire and approach its use more aggressively. Think of the headaches we would save ourselves if we could rid the plants of unexplained dyebands and unpredictable blow-ups in the spinning.

Metallic Card Clothing

Years ago researchers brought out metallic card clothing. The use of it met with resistance then and now. I know one mill that has used this type of clothing since 1926. I was 12 years old at that time and no doubt some of you in this room were born the year this clothing was installed. What I am trying to point out is that the clothing in this particular mill has had more textile experience than you and I. Other cards running a like period of time would have required a minimum of four new sets of clothing. Think of the money that has been saved in clothing by this mill because they adopted the attitude of "We can make this thing work."

Lives are being saved today because researchers in the field of medicine brought about anesthetics which could be used for serious operations without pain to the patient. Suppose doctors had had the attitude of "Well it might work," or "If it works," and only a few used this better tool in their handling of patients; I am pretty sure which doctor you would call on if you needed an operation.

But to get back to metallic card clothing, when we discuss it today we hear remarks "It might be all right for this mill but not for my mill"; or "I tried one card once

and it had some bugs in it so I discontinued testing"; and "I admit that it does a good job and there are fewer neps and less waste but the neps are larger, so I discontinued using it." This attitude toward new developments must go.

Can Spinning

Take the idea of can spinning. This method eliminates one operation in processing. Twenty years ago, to spin yarn from drawing sliver would have caused the man discussing such a process to be committed to a mental institution. But today it can be done. What are we doing in making this method a reality? It is true that we are not resisting the idea, but aren't we lacking enthusiasm? Aren't we hiding behind the thought that to use a big can required too much floor space and/or the idea that its up to Whitin and Saco-Lowell to bring about the engineering changes needed to make this a practical mill operation. The answer to this floor space problem will eventually be solved. It may require a new designed package. I know there are enough brains in our industry to find the answer if only we as supervisors would aggressively attack this problem and not wait for the other fellow to do it.

Evener Motion

Earlier this year at a meeting of the National Cotton Council in Savannah, a paper was given concerning an evener motion for roving frames. After the paper was delivered I heard two comments which were disturbing to me. The first was, and you will pardon the expression, "Why in the hell would you want an evener motion on a roving frame? What I want is a better one on the picker." The second remark was "I'll bet he never develops it."

Let's look at these two remarks for a moment. Suppose we had the best possible evener motion on the picker and we processed our fiber through the card, drawing frame, roving frame and spinning frame into yarn form. You know as well as I do that each of these operations succeeding the picker introduce variations caused by the individual machines. Now suppose we had an evener motion on the roving frame. There still remains only a part of the roving frame and the spinning frame to introduce machine variations into the yarn. This evener motion thereby corrects the faults introduced by cards and the two processes of drawing. Now I ask you, which is more desirable, an

S. J. A. Golfers



W. B. Eiters, Reeves Bros. Inc.; Henry Ashworth, Ashworth Bros.; John B. Cornwell, Reeves Bros.; Charles C. Withington Jr., Ashworth Bros.—J. A. Boyce, Erwin Mills; Carl Merritt, Hubinger Co.; Gordon Wood, Corn Products Sales Co.; Harold Suggs, Howard Bros. Mfg. Co.—E. M. Holt, Cone Mills Corp.; E. G. McIver Jr., Erwin Mills Inc.; Frank Barrie, Universal Winding Co.; Bill Terrell, The Terrell Machine Co.

S. J. A. Golfers



James A. Chapman Jr., Inman Mills; W. B. Dunson, R. E. L. Holt & Associates; George Huguley, Clinton Cotton Mills—W. F. Howard, Lyman Mills Inc.; Chuck Kline, Clinton Corn Products; R. C. Rau, Clinton Corn Products; P. D. Merritt, Dacotah Mills—Ed Young, Allis-Chalmers; Wesley Henderson, Pneumafil Corp.; Frank Perry, Stein, Hall & Co.; Ed Cansler, Saco-Lowell Shops.

even motion on pickers, or an even motion on roving frames?

The second comment, "I'll bet he never develops it," causes me to wonder who we are kidding. Here is something that is entirely new and, if looked at in its proper perspective, is a much needed device. Yet we will wait for this one man to give it to us with no help at all from any of us. With all due respect to all of our friends in machinery manufacturing, there never has been an occasion of installing new equipment that did not require the mill to put forth effort on its part to bring about a satisfactory operation of new equipment. Why will we put forth effort on making new equipment run and not apply this

same energy on new facts given us by research?

I feel compelled to say that we in the operating end of this industry can only operate when things are forced upon us. Our next step in furthering the textile industry is to change our passive attitude toward research and its study of cotton fibers, material handling and machinery design. These studies are bringing about new facts and new concepts in the manufacture of cloth. As the researchers lay out the design on the trestleboard, let us be up and about our task. Researchers can take us out of the darkness of the unknown into the brightness of the future. As to the brilliance and time of this future, it is in our hands and depends on our active enthusiastic support.

National Cotton Council Sponsors Its First Textile Market Research Conference

The following is a report of the Textile Market Research Conference held in May by the National Cotton Council. The conference called market research an important management tool and discussed the things that could be accomplished by the proper employment of the methods of such an analysis. Also explained is a customer acceptance analysis as well as information on the organizing and operating of a market research department.

TEXTILE executives joined with market research specialists in a two-day conference to discuss the future of the U. S. textile industry May 28-29 in New York City. An estimated 350 businessmen participated in the Textile Market Research Conference at the Hotel Statler sponsored by the National Cotton Council. Participants represented a cross-section of textile industry leadership.

An aim of the conference was to determine how the textile industry can expand its markets and gain a greater share of consumer spending.

"The time has come when textile people must take stock of where they stand, and where they want to head in the future," William Rhea Blake, executive vice-president of the National Cotton Council, said in a welcome address. "Every day we see more and more evidence that temporary palliatives such as cutting price, reducing quality and promoting bargain sales will not build and sustain a healthy and profitable textile industry," he said.

Government and trade association officials joined with speakers representing the automotive, metals, retail and textile industries and the independent research companies in offering solutions to these problems. The two-day sessions concluded with a general discussion on the role of market research in merchandising textile products.

Report On Market Research

Consumers do not buy cotton textiles as such, they buy

individual products like cotton dresses, skirts, bedspreads and awnings, according to Frank McCord, market research director of the National Cotton Council. "For this reason programs of cotton product improvement and promotion are conducted on a use-by-use basis," he said. Our job in market research is to look at the whole market, "to take the market apart and examine its parts critically," he said, and added, "in doing this, we find a lot that is unfavorable, but much that is good. The more we study our markets, the more we believe in cotton's future."

In an analysis of the market research program conducted by the council for the raw cotton industry, Mr. McCord said each of cotton's 418 principal uses is evaluated on the basis of quantity, quality, price and promotability. The quantity data tells how big each cotton market is, how strong cotton's competition is and what trends are affecting the size of the total market. Quality-wise, Mr. McCord said, 45 consumer qualities have been evaluated separately in terms of markets in which these qualities are significant and in terms of gain potentials for cotton through specific quality improvements.

Regarding price, Mr. McCord told the conferees that authoritative studies reveal that "the sound price for cotton is the price which is trending down—relative to competitors—over the years with improvements in production efficiency until it reaches a level which will assure a healthy and vigorous cotton and cotton textile industry." He added that in the long run, reductions in the price of cotton would discourage expansions in the production of competing materials and would restore confidence in cotton to the point where cotton could make substantial gains relative to other materials.

On the promotion front, Mr. McCord said market research findings establish basic guides for advertising and merchandising activities. Most of all, however, market research provides the tool for measuring the relative sensitivity of cotton's uses to promotional stimulation. He said cotton responds best to promotion in those uses where personal taste and personal desires are key factors in making sales, as in dresses.

Market Expansion Plan

Harry C. Mills, vice-president in charge of the merchandise department of J. C. Penney Co., proposed a three-point program to expand cotton textile markets. He urged lower, more competitive fiber prices; more emphasis on "creative and imaginative styling that develops obsolescence"; and more intensive research and product development.

Mr. Mills also offered a four-point program for retaining textile volume at its present level. To protect textile markets against further inroads by paper and other materials, he urged the industry to take these steps:

- (1) Establish quality standards by which the consumer can know what she is getting for her money.
- (2) Establish industry control to prevent irresponsible statements on informative labels and in publicity and advertising.
- (3) Establish procedures to avoid product suicide through depreciation of quality.
- (4) Build merchandise from consumer point of view.

In a plea for industry control over exaggerated claims, Mr. Mills said that fabrics should not be promoted as "washable" unless they are both colorfast and have dimensional stability. "Daily, false claims are being made, and

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Jockeys know the inside rail means greater gain from less distance. For similar reasons, you're sure to win with Dixon's anti-friction front top roll. Only the small diameter inner race turns, requiring far less travel and wear — and *only* Dixon offers this cost-saving advantage. Note these exclusive, unequalled Dixon front roll features:

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3. Lifetime lubrication held in by lint-proof contact seals.
4. Less wear, longer life because only inner race turns.
5. Unique swivel mounting assures front roll and front saddle self-align automatically.
6. Zero thrust load, due to self-alignment features.
7. Concentricity within .001".
8. Assembled from only 2 major pieces.
9. Simple buffing without attachments.
10. Allows side piecing up.

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Northern Sales: William R. Fox, P. O. Box 380, Providence, R. I.

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daily, being disproved in our own testing laboratory," he said. "A code of advertising, policed by the industry itself, would be a lot easier to swallow than the government controls which often follow on the heels of public complaints," he added.

In his discussion of ways to increase sales, Mr. Mills said "the cotton textile industry must adopt the most aggressive program that it is possible to develop." Government price supports enable competitive fibers to undersell cotton, and, "if you want to expand, certainly something must be done about cotton pricing," he said.

Government Spokesman

A top ranking government official said that management and labor must co-operate with the government to halt the steady rise in the Consumer Price Index. Under Secretary of Commerce Walter Williams said, "Government has no monopoly in this effort. If management and labor do not co-operate in the effort to make productivity keep in step with increases in cash income, it is reasonable to suppose that inflation will be with us for a long while and will lead to unemployment and lower profits." Mr. Williams stated that the desire for more and better goods must be satisfied within a framework that will encourage competition. "As citizens as well as businessmen, you should use every influence to encourage public policies which are anti-inflationary, even when it hurts. In a democracy with a free enterprise economy, there is no practical substitute for a sense of responsibility in each of us for the long-term interests of all of us," he said.

Mr. Williams tempered his look into the nation's business future by pointing out that projection of business trends is much more difficult than projections of population. He remarked that over the years, the nation's output of goods and services has had an annual increase of three per cent. National income, or earnings arising from current production, has had a parallel increase.

The Competition

"Why should a man with a rising standard of living use paper napkins or paper towels, or lay his head upon a paper pillow?" asked Dr. M. K. Horne Jr., chief economist of the National Cotton Council. "Textiles should be the products for those who seek more luxury, more comfort, more feeling of dignity and importance," he said, "in the era of rising incomes and well-being which we hope will continue for the average American. We ought to find a great source of competitive strength for textiles in the fact that the standard of living is rising year by year."

In discussing the shifting emphasis of cotton's competition, he said that if cotton consumption had kept pace with all consumer spending in the past eight years, the domestic market for cotton today would be 12 instead of nine million bales annually. He accounted for the three-million-bale difference as follows: less than 800,000 bales went to other textile fibers. The drop in net cotton textile exports took about 600,000 bales. Losses to paper, plastics and other non-textile materials accounted for nearly a million bales. The balance of about 700,000 bales represented a loss to other competitors for the consumer dollar.

"In towels, we compete with the air blower; in bags, with new techniques of bulk handling; in blankets, with the electric blanket, reducing the need for the fabric itself; in

awnings, with air conditioning; in tarpaulins, with paints and other features which enable motorized equipment to stand weather exposure; in industrial thread, with heat sealing; and in electrical insulation, with printed circuits," he said. The tendency to make textile products stronger and more durable has also exerted an influence in slowing textile consumption, he added.

"Yet there is an abundance of opportunities for cotton in particular, and for textiles in general. . . . Our whole market is now concentrated much more heavily in the apparel and home furnishings field than it used to be, and in these uses particularly we surely ought to be able to hold our own or go forward competitively. If we do, the rising population and standard of living will turn the trend of our market upward," he said.

Importance Of Market Research To Other Industries

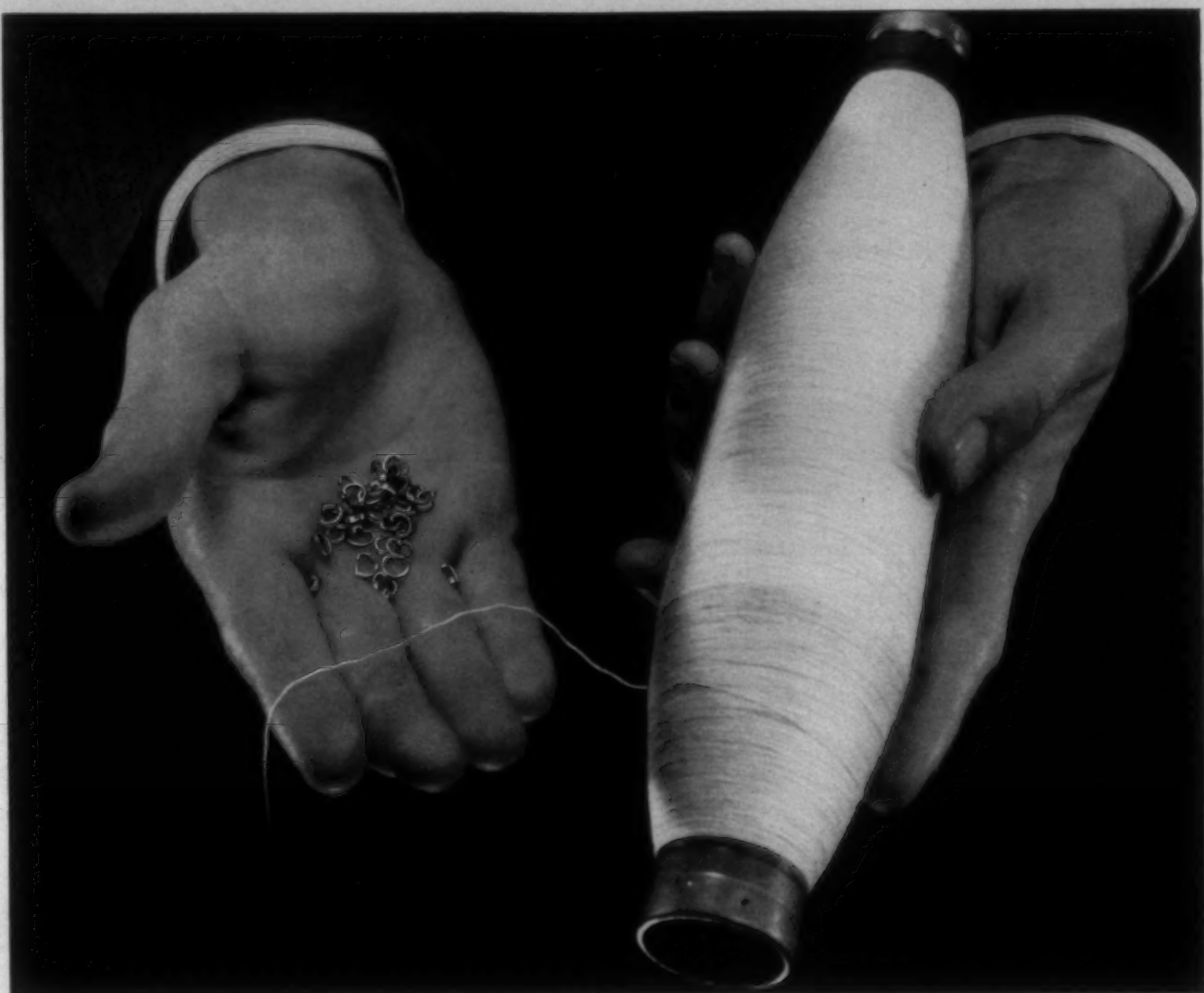
The importance of market research and the part it plays in other industries was discussed before the conference. J. Emmet Judge, merchandising and product planning manager of the new Edsel Division of the Ford Motor Co., told the council that market research studies initiated by Ford will have covered almost ten years by introduction time for the new medium price car line early this Fall. "Everything connected with the Edsel has been built around the results of our market research," he said. "This includes the car line itself as well as its many facets—advertising, sales promotion, marketing and dealer recruitment to name only a few."

The Aluminum Co. of America's manager of commercial research, E. M. Strauss Jr., outlined case histories showing how a well integrated program of market and commercial research resulted in development of new products and conversion of existing products for larger markets. The manufacture of aluminum corrugated farm roofing and siding from scrapped war-time aircraft was one of the examples cited by Mr. Strauss as a use of market research. The thorough market research project paid off, he said, "and by 1948, Alcoa roofing sheet had been applied to approximately 500,000 farm buildings around the nation. In fact, it was the largest tonnage product line sold to a single market that made substantial use of the war-time scrap."

Customer Acceptance Analysis

Dilman M. K. Smith, vice-president of Opinion Research Corp., Princeton, N. J., challenged the textile industry to start utilizing the techniques of modern market research to help stabilize the industry and bring every segment of the business a fair profit. He said, "trial and error methods of trying to determine what the customers want is too costly in today's fast-moving economy. Sound management of the future, in the textile field, will devote as much time trying to understand how people respond to product appeals as management now does to the technology of producing goods."

The major points made by Mr. Smith are: (1) The next big movement in the textile industry will of necessity be the utilization of modern, scientific market research in all its branches. (2) The textile industry, as a whole, is the last major industry that is a hold-out on the utilization of modern market research techniques. (3) The task calls for an integration of all market research techniques. (4) While some instances may be encountered in such segments of the industry as ready-to-wear and other types of clothing where



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it may be impractical to pre-test acceptance of a single item, "there are certain basic problems that can be resolved, and if the industry proceeds on these basic principles, the tremendous loss in producing items that do not sell at profitable margins can be avoided. These basic principles include five areas of inquiry: (a) An understanding of long-term trends. (b) Research that gives an understanding of consumers' wants and desires. (c) Modern market research techniques can give a better understanding of the types and ranges of styles that are acceptable in different price ranges, in various geographic areas of the country and among special groups within the general public. (d) An understanding of the life span or selling span of top-selling items. (e) A system can be established to make scientific pre-testing of new fabrics before volume production.

"The textile industry is going to survive even if it does not make use of market research procedures," Mr. Smith said. Pointing out that mere survival is not adequate and that if the textile industry can learn to produce the kind of values that the consumers want, he said, "textile products can be produced in an orderly way and be sold at a price that will return every segment of the business a fair profit."

Organizing And Operating A Market Research Dept.

W. E. Clark, vice-president and general manager, textile division, U. S. Rubber Co., spoke on "Organizing and Operating a Textile Market Research Department." In organizing its market research department he said that his firm had to take into account limitations placed by rigid industrial specifications on the one hand and styling to meet the buying public's preference on the other. Having

little, if any, contact with the ultimate consumer, his organization still had to keep its finger on the pulse of the market for its own protection as well as a means of best serving its customers. The market research department was established as a service organization designed to assist in sales, merchandising, manufacturing and development planning. It must be free and unhampered in its activities if lines with unsatisfactory profit potentials are to be weeded out and new and dynamic sales areas can be entered.

"Our next decision was to decide on the size and scope of our marketing research organization," Mr. Clark said. "In broad terms it would have three major functions, which are market research and analysis, economic analysis, and sales analysis along industry and product lines. It was further recognized that the study of markets on other than the local regional level would require maintaining an organization larger than could be economically justified. It was decided as the occasion arose to meet this need, we would engage the services of marketing research consultants. With this approach established, we decided that a relatively small staff within our division would suffice."

Mr. Clark noted that the textile industry is now under a three pronged attack. First, it must obtain its fair share of the consumer dollar. Second, it must cope with dynamic changes brought about by the man-made fibers. Third, it has to meet the threat of foreign imports. He ended his speech with a review of the results which have been obtained through this management tool and "further observe that sales figures for 1957 will show 57 per cent of our total outside sales will be in new items, which were not produced by our textile division five years ago—then I must conclude that a marketing research department is a much needed necessity and not a luxury."

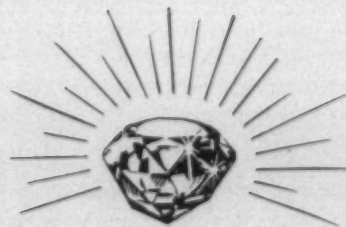
Dan River Mills Celebrates Its

75th Anniversary

BACK in 1882, when the South was still in a turmoil following the War Between the States, six men—a contractor, a physician and four merchants—banded together in Danville, Va., to establish an industry for what was then a town of some 7,000 persons. The leader of the group was a contractor and brickmaker—Thomas Benton Fitzgerald. The others were the three Schoolfield brothers—Robert A., John H. and James E.—all merchants, Dr. H. W. Cole, physician, and B. F. Jefferson, a coal, wood and lumber dealer.

On the advice of Robert A. Schoolfield—who had been greatly impressed by the way the textile industry was "catching on" in Georgia at the time—the group decided to form a stock company "for the purpose of manufacturing cotton and woolen fabrics, rope, etc." Initial capital was \$75,000, and Mr. Fitzgerald, being the largest subscriber, was named the first president, without compensation. Robert A. Schoolfield was named general manager, secretary and treasurer.

Following the grant of a charter, The Riverside Cotton Mills began to produce its first yarn and cloth in April



1883. At first the new firm manufactured only 27-inch plaids. That first mill was equipped with 2,240 spindles and 100 looms.

Today—75 years later—the outgrowth of that modest beginning ranks sixth or seventh among textile organizations in this country. From 2,240 spindles and 100 looms it has grown to 840,912 spindles and 18,365 looms. Founded with a capital of \$75,000 75 years ago, it now lists assets of some \$140 million.

There is much to the story of those 75 years and what they did to The Riverside Cotton Mills. And it is largely a

story of success, good fortune and hard work. Expansion followed expansion, and with a number of acquisitions along the way, The Riverside Cotton Mills became Dan River Mills Inc., certainly one of the most respected names in the textile industry today.

It was a long pull, as the record will show, and the folks now responsible for the organization's future are justifiably proud of the accomplishments of the past. And as folks full of pride will do, they recently staged a mammoth celebration and invited one and all to come take a look at both the oak and the acorn. For three event-packed days—July 2, 3 and 4—more than one and nearly all did share in the celebration.

Dan River Milestones

1882—Charter issued to The Riverside Cotton Mills.

1909—The Riverside Cotton Mills merged with The Dan River Power & Mfg. Co. New corporate name: The Riverside & Dan River Cotton Mills Inc.

1946—Corporate name changed to Dan River Mills Inc.

1956—Acquired Iselin-Jefferson Co. Inc. and its subsidiaries—Iselin-Jefferson Financial Co. Inc. and Woodside Mills Inc. Also acquired the assets of Alabama Mills Inc.

Dan River Today

Subsidiaries: Iselin-Jefferson Co. Inc.
Iselin-Jefferson Financial Co. Inc.
Woodside Mills Inc.
Dan River International Corporation

Plants (15): Danville Division — greige manufacturing and finishing.



W. J. Erwin opened Dan River's 75th Anniversary Week celebration by tolling this historic bell from the company's old No. 2 mill. Looking on is Mrs. Minnie Walker, long-time Dan River employee whose father—T. Dave Wall—opened the first bale of cotton ever processed at the company's original No. 1 mill, completed in 1883.



Erwin, Gruenther, Browder, Stanley

General Alfred M. Gruenther, president of the American Red Cross, delivered the main address at a banquet July 2 at the Danville Golf Club, attended by a host of distinguished visitors. Flanking General Gruenther are W. J. Erwin, Dan River president; Basil D. Browder, executive vice-president; and Gov. Thomas Stanley of Virginia. North Carolina's Gov. Luther Hodges also attended the banquet, as did two of Virginia's former governors—John S. Battle and Colgate Darden.

Alabama Division — greige manufacturing with plants in Aliceville, Clanton, Dadeville, Fayette, Greenville, Wetumpka and Winfield, Ala.; and Rome, Ga.

Woodside Mills—greige manufacturing with plants in Anderson, Easley, Fountain Inn, Greenville, Liberty and Simpsonville, S. C.

Research Laboratories: Danville, Va.

Executive Offices: Danville, Va.

Sales Headquarters: Dan River Mills Inc., New York City
Iselin-Jefferson Co. Inc., New York City

Sales Offices (15): Atlanta, Baltimore, Boston, Charlotte, Chicago, Cleveland, Dallas, Denver, Kansas City, Los Angeles, Montreal, New York, Philadelphia, St. Louis, Seattle.

Products: Dress fabrics, dress and sport shirting, sportswear fabrics, decorative fabrics, work clothes fabrics, yard goods, sheets and pillow cases, print cloths, synthetic fabrics, tricot fabrics, corduroys, denims, gabardines, industrial fabrics.

Equipment: Looms—18,365
Spindles—840,912

Employees: 17,950

Stockholders: 9,546

Common Shares Outstanding: 4,483,766

Preferred Shares Outstanding: 202,020

Sales: 1956—\$122,384,000

1957 (anticipated)—In excess of \$160,000,000

Principal Officers: W. J. Erwin, President
Frank Talbott Jr., Chairman of the Board

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Pictured above is an aerial view of the greige manufacturing and finishing plants in Dan River's Schoolfield Division located in Danville. These plants, combined with those in the firm's Riverside Division—also in Danville—are considered to be the largest single-unit textile operation in the world.

Opening, Picking, Carding & Spinning

A Study On . . .

Cotton Opening & Cleaning Methods

. . . From The 1957 Cotton Research Clinic

By DR. ZOLTAN SZALOKI, Assistant Director of Research, Whitin
Machine Works, Whitinsville, Mass.

The ultimate expectation of opening and cleaning machinery and what steps have been made and will be made in that direction are outlined in this paper delivered before the National Cotton Council's Cotton Research Clinic.

THE Whitin Axi-Flo cleaner was introduced to the industry in mid-1954 together with the Axi-Feed opening unit, which at that time was a separate accessory applied

to the blending feeder. The Axi-Flo cleaner is a relatively simple machine having two pin-covered cylinders rotating in the same direction and parallel to the input-output flow line of the fibers processed. Fibers pass around these cylinders with their specially designed pins and are exhausted to a cage section and thence to a succeeding cleaner such as a Buckley downstroke, or for high grade cotton (middling or better) directly to the picker.

The distinguishing characteristic of the Axi-Flo is that the very effective cleaning action takes place as a result of buffeting agitation of the small tufts delivered by the Axi-

Feed as against the conventional and long used feed roll and beater principle. Test results detailed later will show performance characteristics of the Axi-Flo. In addition to its cleaning capacities, the machine has demonstrated excellent blending performance for synthetics and blends, indicating a broader field of application and versatility.

In each of the mills in which these Axi-Flo and Axi-Feed units have been installed, the existing opening, cleaning and picking machinery layouts were examined carefully. The results after the new machines were installed were also explored thoroughly. A unique opportunity was provided to explore the use of many, if not virtually all types of machinery and combinations of cleaning machinery now used. A wide range of practices were analyzed and evaluated. Some were good, many were indifferent and some were poor.

The data and experience provided a fairly broad base for knowing what mills are doing in their opening rooms today, what equipment is being used, and deficiencies in practice. They also provided Whitin with new higher objectives toward which to move, provocative challenges, and inspiration for future improvements.

Ideal Conditions

These questions could be fairly asked. What should efficient opening and cleaning machinery do? How close are we to doing it with our present machinery? The answer to both is subject to discussion and divided opinion, but offered here as based on present knowledge and experience.

Speaking of cotton, efficient opening and cleaning machinery should do the following: remove all the foreign matter completely—leaf, twigs, grass, bolls, dust, dirt, everything; remove all undesired elements of cotton present, such as neps and motes and the shorter fibers. Conversely, the cotton should be manipulated as little as possible in the fewest number of machines with the long fibers left intact and the stock should not be curled or affected in character.

Now going to the second question which refers to our success in achieving that ideal. If we take industry's present practice as our gauge, the performance is far short of the goal. There is substantial evidence that in many mills the cotton leaves the opening room in worse condition in some ways than when it went in. Some of the dirt and undesirable matter has been extracted, to be sure, but too much of the remainder has been pulverized into peppery dust inextricably attached to individual fibers, many long fibers broken, reducing its spinnability and value as well as being curled, overbeaten and neppy.

The advantages of good opening and cleaning are clear, but often overlooked in mills whose attention is focused on larger operations involving greater numbers of more expensive machinery. The better the cotton is opened, the better the mill runs. Pickers produce better laps and the cards and all the machinery in the mill run cleaner and more efficiently, the yarn is more uniform and stronger. Proof is available that fabric not only has increased strength, but in some instances is improved in appearance and color.

Accordingly, we would like to discuss some of the common practices now used in opening rooms and the unfavorable results of their use. Test data will show how those difficulties can be eliminated and the contributions made by the Whitin Axi-Flo and Axi-Feed toward improvement in this area.

Blending And Mixing

Blending feeders are the accepted and suitable machines for blending and mixing the cotton fibers. Opinions differ widely, however, in regard to the optimum number of bales which should be used for satisfactory blending. One practical limiting factor is the capacity of the bin of the blending feeder, and another, the smallest amount of cotton the tender can lift or strip from each bale. Since the smallest pieces of cotton the tender takes off the bale is in the neighborhood of ten pounds and the capacity of the bin of the blending feeder is approximately 60 pounds, it is obvious that about six bales per blending feeder is the optimum practical figure.

The purpose of blending is to average out the differences in quality between bales of cotton so that the blended cotton is uniform during the spinning process. A mixing program should be set up to even out variation between lots of bales. To maintain an even blend, the Micronaire device is undoubtedly helpful. Its use results in maintaining the reasonable average in fiber fineness which is necessary for stable spinning conditions. A further move in the right direction is the often neglected practice of opening the bales and allowing the cotton to bloom and become stabilized to the humidity and temperature conditions prevailing. A 24-hour period should be allowed.

Overloading The Blending Feeders

It is quite often found that the number of the blending feeders is insufficient, usually because of inadequate space. They are frequently overloaded and forced to run up to 300-350 pounds/hour, instead of the recommended 160-200 pounds/hour.

To explore the effect of overloading the blending feeders on cleaning efficiency, we processed SLM 1 1/16-inch cotton through our opening and picking line in our research department. This line consists of the following: blending feeders with Axi-Feed, feed table, followed by the Axi-Flo and downstroke openers and cleaners, and a short 20-foot duct feeding to a two-beater picker. The result of this overloading test is shown below:

OVERLOADING BLENDING FEEDERS

Production Rate	Line Cleaning Efficiency
Blending Feeders—300 lbs./hour.....	60.5%
Blending Feeders—180 lbs./hour.....	65.5%

Good preparation helps the cleaning and the evenness too, hence, we always recommend the use of two blending feeders per picker.

It is not very popular in the U. S., but many in the European textile industry, and abroad elsewhere, are convinced that the best way to assure an even feed to the individual blending feeder is by the use of an extended feed apron. The apron drive is controlled by the swinging door in the bin of the blending feeder and when this is properly set, chokes and machine break-downs are infrequent or avoided entirely. This type of apron helps to secure a better blend. They require considerable floor space and that is their distinct disadvantage. Further, best results are secured when the blending feeders are set to their lowest rate of feed, and the cotton level in the bin of the first hopper feeder of the picker line will fluctuate less. In practice, this has a beneficial effect on lap evenness and even on nep count, as shown later in experimental test results.

In a modern spinning mill layout, the warehouse, the

room for the conditioning of the bales, the rooms for the blending, opening and picking machinery should be adjacent. This means reduction in transportation costs and short ducting between the various machines. Mills having this type of layout benefit in cleaning, lap evenness and a low nep count.

Some mills are not so fortunate. Often the mixing, or the mixing and opening room, is some distance away from the picking machinery. Experiments have shown that long ducts with the dust trunks produce an increase in tuft weight, counteracting what was achieved in the opening line. Sometimes the distances are so great that the cotton has to be drawn through a fan. This is, of course, an even worse situation and detrimental to the nep count.

A specific test was conducted in our research department with SLM cotton where in one instance the shortest possible ducting was used between the opening and picking machines and a paddle type separator was used to avoid any rolling of the stock. In the other test, a long duct was used and the cotton was drawn through a fan. The difference of 7.4 per cent in nep count is shown in the following table:

DUCT LENGTH AND NEP COUNT

Machinery and Ducting	Nep Count Per 10 Grains
Short pipe used	270
Long pipe and fan used	290

Compressing During Opening

Repeated tests showed that maximum opening can be obtained when the cotton is loosened gradually during the opening process. Also, compression by feed rolls or by other means, as often happens on conventional machinery, should be avoided. On the present Whitin opening and cleaning line the stock is always kept in a loose, floating state from the blending feeder through the Axi-Feed, mixing feed table and Axi-Flo. In recent tests, resort has been made to the paddle-type condenser to eliminate the rolling action of the cage-type condenser, an effect which is often noticed in mill operation. Fig. No. 1 shows the view of the paddle-type Air-Flo separator as it was used over the hopper feeder of the picker line. Fig. 2 shows the general design with the entrance pipe, the perforated sheet sides for

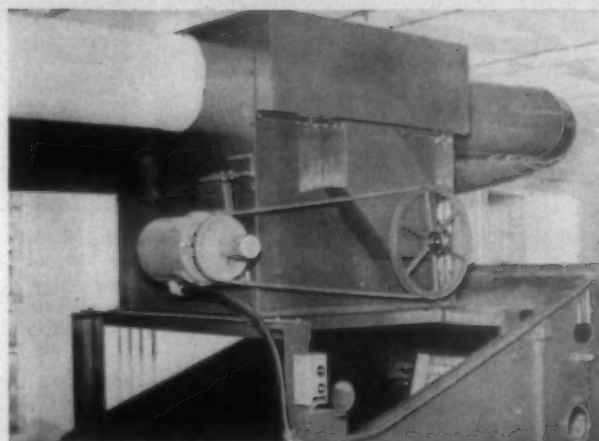


Fig. 1—A paddle-type Air-Flo separator as it is mounted over the hopper feeder of the picker line.

separation of the stock, and the paddle wheel. This type of separator delivers the cotton in an open state. On an opening line used for cotton graded middling or better, the stock is never compressed until it arrives at the feed rolls of the breaker section of the picker.

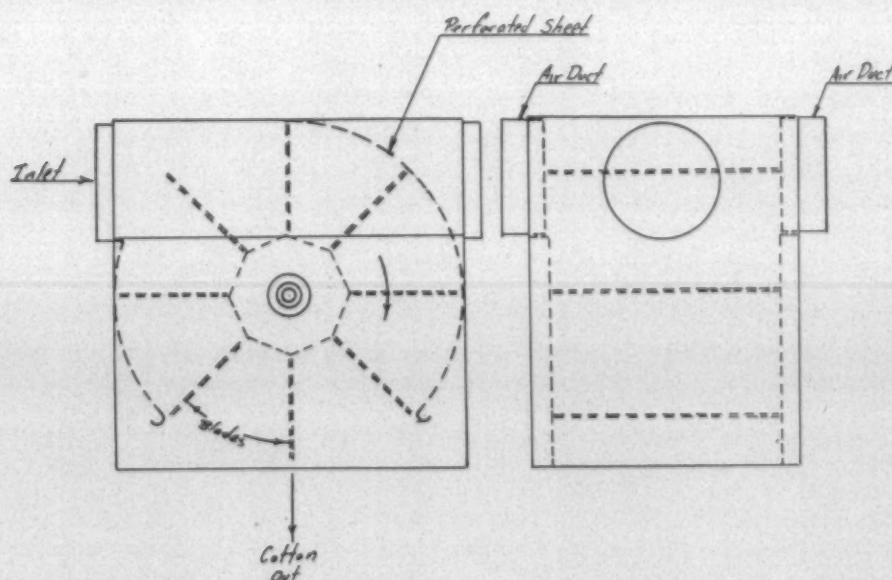
Insufficient Opening And Cleaning

Looking over the opening rooms of the different spinning mills, a wide variety of machines are found in use. Not only does the type of machinery vary markedly, but the number of different opening machines varies also within wide limits. There are mills where the opening line is short or even non-existent, leaving the cleaning to the picker and the card room. These installations might work when using high grade, clean cotton, but it is by no means an efficient procedure. For best over-all results, cleaning should be done in the opening room prior to the picking.

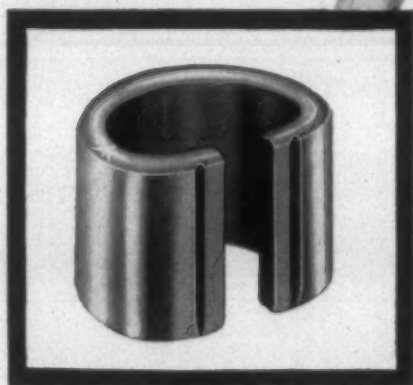
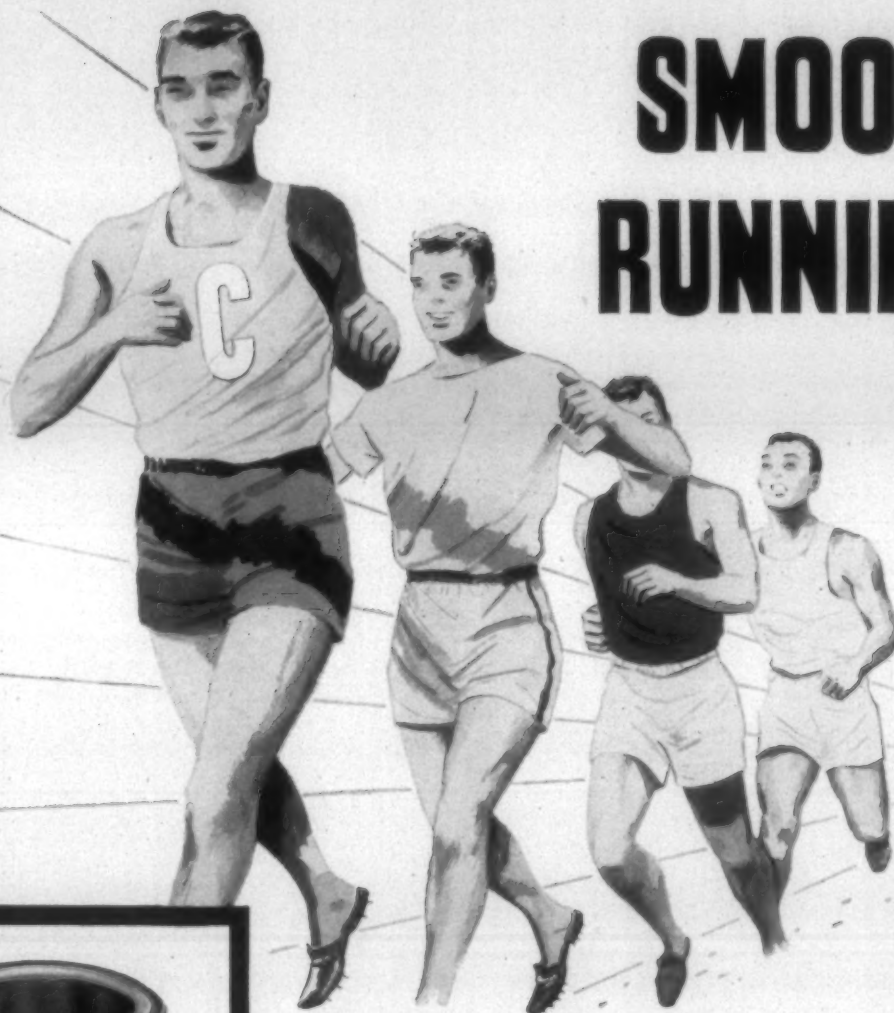
To demonstrate the effect of good opening and cleaning on nep count, card waste and yarn properties, a number of interesting tests were made using three different machine organizations.

In organization "A" no opening machinery was used and the cotton was fed from the blending feeders to the two-

Fig. 2—Air-Flo separator. The action of this equipment has no rolling effect on the stock being processed as is found on the more conventional screen condensers. The stock is blown in on a paddle and as the paddle rotates in a clockwise direction the air stream is exhausted through the perforated sheet and the stock drops out of the condenser into the hopper of the next machine in the line.



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OPENING, PICKING, CARDING & SPINNING

beater picker. With additional machinery to show the effects of overmachining in organization "B" we used blending feeders, three porcupine-type downstroke cleaners, followed by the same two-beater picker. Organization "C" included the present Whitin line consisting of blending feeders, Axi-Feed, feed table, Axi-Flo, downstroke opener, followed by the two-beater picker. The downstroke was by-passed for the SM cotton.

Strict middling 1 1/32-inch staple cotton was used first and nep count was made on the card web. Of course, the same card, roving and spinning organization and settings were used during the entire test. We found that when the opening machines are eliminated the nep count increased by ten to 13 per cent, and the amount of flat strip and lickerin wastes increased as shown in the table below:

EFFECTS OF ELIMINATING OPENING MACHINERY ON NEP COUNT AND CARD WASTE

Test No. 1, SM Cotton			
Machinery Organization	Nep Count Per 10 Gr.	Lickerin Waste	Flat Strip
A	340-350	Incr. by 8.2%	Incr. by 6.5%
C	310-315		
present line			

By eliminating the opening machines, the major portion of the motes remained in the stock, being opened on the card and causing an increase in the nep count. Since in that instance, all cleaning done is being performed by the picker and card, it is obvious that the amount of lickerin waste and flat strip must increase. After spinning, the yarn was tested and the results are shown in the table herewith:

EFFECTS OF ELIMINATING OPENING MACHINERY ON YARN

Test No. 1, SM Cotton		
Yarn Properties	Org. A	Org. B
Ave. Unevenness	114.4	103.1
Deviation %	20.1	15.2
Size Variation %	4.0	1.7
Break Factor	2205	2285
Grain Break	301.5	307.2

In every instance, the yarn prepared on organization "C" was better, including appearance of the yarn on the blackboards. For the first test, as mentioned above, we used a good grade cotton. Then, we repeated the test with an SLM grade, 1 1/16-inch staple.

The card waste and nep count test showed the following results:

EFFECTS OF ELIMINATING OPENING AND CLEANING MACHINERY ON NEP COUNT AND CARD WASTE

Test No. 2, SLM Cotton			
Machinery Organization	Nep Count Per 10 Gr.	Lickerin Waste	Flat Strip
A	310	Incr. 36%	4.8%
C	275-270		
present line			

The nep count increased, as it did with SM, by 11-13 per cent. Because the higher non-lint content of the SLM, the increase in the lickerin waste is naturally very much higher than it was in the test using the high grade cotton.

The mechanical properties of the yarn spun from the 1 1/16-inch staple SLM cotton are shown in the following table:

EFFECTS OF ELIMINATING OPENING AND CLEANING MACHINERY ON YARN

Test No. 2, SLM Cotton		
Yarn Properties	Org. A	Org. C
Ave. Unevenness	101.2	94.0
Deviation %	19.3	17.0
Size Variation %	4.9	3.5
Break Factor	2190	2350
Grain Break	291.6	312

As in the previous test, the yarn from organization "C" indicates better characteristics for every item.

In an earlier test, we illustrated the effect of opening on the regularity of the picker lap. For these series of tests, since we were not interested in the cleaning, we used 1 1/2-inch staple 1.5-denier viscose staple. First, we processed the material through a complete line comprised of blending feeders, Axi-Feed, Axi-Flo and a two-beater picker, similar to the machinery used in the previous organization "C." The downstroke cleaner was by-passed.

As a next step, the Axi-Flo opener was by-passed and staple fiber went from the Axi-Feed to the picker. Finally all opening machines were by-passed and the stock was fed from the blending feeders straight to the pickers, as in organization "A," mentioned above. The laps were checked on the Uster tester and the results indicate a very even lap from the complete line. The second lap is not even, due to the lesser degree of opening. The third graph shows the most uneven lap. For this lap, all opening machines were by-passed. Due to lack of adequate opening, the tufts in the lap are bigger, affecting the inch-by-inch evenness unfavorably.

Overbeating

It is well-known that machine picked cotton creates serious problems in opening rooms. Conventional or older type machinery simply cannot do really effective cleaning. In an attempt to solve the problem, it has been common practice for mills to add cleaning machines to their lines. Quite frequently opening machines were used in tandem.

Concerning the tandem use of opening machines, tests done by the Shirley Institute have shown that this practice was relatively ineffective. Our own tests confirm these results. Hence we do not recommend the use of machines in tandem. If for any reason two identical opening machines must be used in the opening line, the best procedure is to insert a different type of machine between them. If only a hopper feeder is used as the intermediate machine, it will secure a rearrangement and redistribution of the cotton tufts, a factor helpful in the cleaning process.

In exploration of this subject and to determine the effect of the use of more than sufficient machinery and its relationship to nep count and yarn characteristics further tests were made with the same SM and SLM cotton qualities.

In Test No. 3, the cotton was processed on organization "B" through the blending feeders, then passed through a downstroke opener three times and thence to a two-beater picker. This test reveals very clearly and underscores the widely held opinion that overmachining increases the nep count. The results of this test are shown here:

EFFECTS OF OVERMACHINING ON NEP COUNT AND CARD WASTE

Test No. 3, SM Cotton

Machine Organization	Nep Count Per 10 Gr.	Lickerin Waste	Flat Strip
B	355-360		Incr. 3%
overmachining C	310-315		
present line			

The effect of overmachining on the spun yarn is shown on the table below. Here again a comparison is made processing SM cotton on the machinery organizations "B" and "C."

EFFECTS OF OVERMACHINING ON YARN

Test No. 3, SM Cotton

Yarn Properties	Org. B	Org. C
Ave. Unevenness	108.1	103.1
Variation %	18.7	15.2
Size Variation %	3.7	1.7
Break Factor	2225	2285
Grain Break	304.8	307.2

Tables below show the effect of overmachining on the SLM cotton.

EFFECTS OF OVERMACHINING ON NEP COUNT

Test No. 4, SLM Cotton

Machine Organization	Nep Count Per 10 Gr.	Lickerin Waste	Flat Strip
B	290	Incr. 13.6%	Incr. 2.5%
overmachining C	275-270		
present line			

EFFECTS OF OVERMACHINING ON YARN

Test No. 4, SLM Cotton

Yarn Properties	Org. B	Org. C
Ave. Unevenness	100.8	97.0
Deviation %	18.3	17.0
Size Variation %	4.8	3.5
Break Factor	2240	2350
Grain Factor	308.4	312

In the test data above, it appears clear that the use of minimum number of effective opening and cleaning machines gives better results. It should also be kept in mind that to keep the nep count to a minimum, the multiple use of the same type of machine should be avoided, especially in tandem.

Research Results

These research tests confirm in the laboratory the results secured in mill practice from the Whitin Axi-Feed and Whitin Axi-Flo. In general, both mill and laboratory tests show that on the average a nep reduction of at least ten per cent, and in some instances as high as 30 per cent, should be secured over what can be done with conventional opening equipment.

The importance of all of these tests does not lie so much in the actual figures shown, because of wide variation in cotton quality and the types and arrangements of machinery used in mill practice. The distinctive and outstanding fact to be noted is the definite indication that nep count increases and the quality of the yarn decreases whenever the opening is insufficient or when too many machines are used or identical machines used in tandem. In other words, the minimum nep count and the best yarn quality are

secured when opening and cleaning is done in a properly equipped opening room and where good practices are followed in respect to avoiding long ducting.

Future Possibilities

Now turning to the future, the question can easily be asked: What progress can be expected? Going back to our definition of ideal opening and cleaning, we pointed out that all of the foreign matter such as neps and motes should be removed, and that this should be done without damage to the cotton quality or character. Both sections of this definition, the positive and the negative, are extremely important.

It seems now we can say with surety that substantial progress has been made toward the first of the objectives, the removal of all of the foreign matter and undesired cotton material in the mix. As a general statement it may be said that acceptable mill standards now are met by the removal of 50 per cent of this waste material by the time the cotton is in the picker lap, with a few mills doing slightly better than that. With the Whitin Axi-Feed and Axi-Flo and utilizing our present knowledge of machinery layout and number of machines, we feel that mills should expect to and should remove from 65 per cent to 68 per cent of this material.

As reported above, this can be done and is being done in many mills with a reduction of ten per cent to 30 per cent in their nep count as compared to their former results, indicating that progress is being made in that respect also. We do expect further progress in both of these areas. It seems that within the foreseeable future an even greater amount of waste can be extracted successfully, while retaining the advantage of a lowered nep count and avoiding all of the damage done to cotton by overbeating and overmachining. Prophecy is dangerous but enticing. A reasonable goal now is to remove 80-85 per cent of the waste by the time the cotton is in the picker lap and perhaps to reduce the nep count by another five per cent from the low levels now secured.

Even now, the principles and general methods for securing these objectives are clear. Specifically, we are thinking in terms of using blending feeders with Axi-Feeds, one Axi-Flo if good grade cotton is processed, followed by another cleaning unit if lower grade cottons are processed. The line will feed to a more efficient two-beater picker than the conventional one now being used.

A.I.E.E. Textile Meet Slated For Nov. 14-15

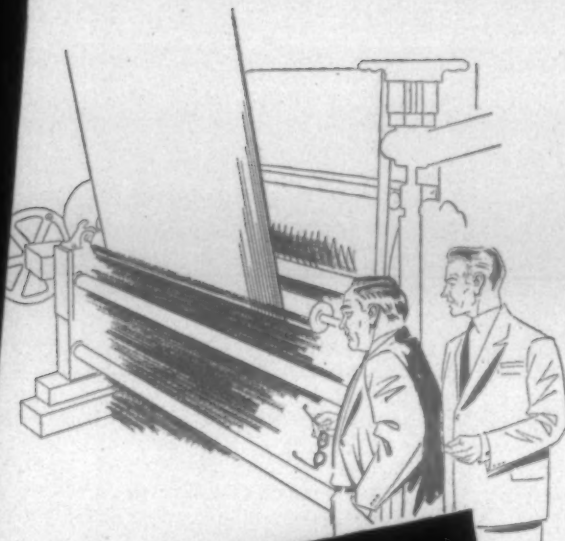
A forum, "What's New in Textile Electrical Equipment," will be one of the features of the sixth annual conference on Electrical Applications for the Textile Industry, Nov. 14-15, at North Carolina State College, Raleigh. It is jointly sponsored by the textile industry subcommittee and the general applications committee of the American Institute of Electrical Engineers. The two-day program will consist of three sessions featuring speakers of national prominence on electrical equipment and applications in the textile industry. A tour of the engineering laboratories at the college also will take place. A majority of those attending the conference are expected to be engineers and others who are directly connected with textile mills in either the design, installation or maintenance of electrical equipment.

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Warp Preparation & Weaving

A Suggested Loom Inspection Schedule

—STAFF PREPARED—

By putting the various steps in the inspection operation in a logical sequence, as described here, the weave room supervisor will find that he may save vital time in checking out a new warp. This outline is suggested as one way to do the job and is presented as a guide to the supervisor who feels that to be efficient, one must first—have a system, and second—follow that system.

PROBABLY the most important time for the loomfixer to inspect the loom is during the time between the cleaning of the loom, after a warp has run out, and the time the warp men place a new warp on the loom. Close appraisal can be made of the various motions on the loom. All nuts are readily accessible and can be tested to make sure they are firmly secured. In the case of cam looms, treadles, treadle rollers and cams can be easily inspected. In the case of dobby looms all parts of the dobby head can be observed after it has been cleaned and oiled. By observations, the reliability of the oiling schedule can be determined.

When the smash hands have finished their job and the new warp is ready to run, the supervisor has what is probably his best opportunity to inspect the loom. Regular and thorough inspection of all the looms in the weave room is necessary and most helpful in the proper operation of the job. It is likely that if a new warp is started-up correctly, it will run properly throughout its stay on the loom. That is, of course, barring major breakdowns which cannot be eliminated but can be substantially minimized by completely honest inspections during warp-out time.

This outline of inspection procedures is presented as a guide to the supervisor who feels that to be efficient on any job one must, first—have a system, and second—follow that system. This outline is not presented as being either original or unique, in any way. It is simply a logical sequence of checkpoints which are important to the loom's operation. The experienced supervisor may find this outline to be an extremely good method of remembering all the checkpoints. The old loom man is probably inspecting all the items already but he may find the sequence helpful in getting the job done with more speed, if not thoroughness.

Loom Inspection Cycle

The inspection cycle is started with the shuttle in the left-hand or shipper end of the loom. Place an empty quill in the shuttle and, with relation to the shuttle entering the box, check the setting of the box plates and wooden binder.

When this is completed, inspect, in sequence: the parallel of the picker; setting and operation of the midget feeler and filling motion; length of picker stroke, height of lug strap, the setting of the pick arm; and the appearance of the check strap. The last items to inspect with the loom in this position are to see if the take-up clutch disengages properly and checking the take-up roll gearing for wear and proper depth of mesh.

Indicate for a filling change and turn the loom's crankshaft over throwing the shuttle under the battery. With the crankshaft in proper position, check the setting of the shed to the race plate. Next, by measuring the distance from the reed to the fell of the cloth with the harness level, the timing of the harness is observed. The condition of the harness straps can be easily noted while these observations are being made. Since the shuttle is under the battery, the condition of the picker and box leather in the left-hand box can be easily observed while turning the crankshaft forward, by hand, so that the shuttle feeler and thread cutter are brought into operating position. They may now be checked for proper setting and operation.

Ease the crankshaft back to bottom-center and turn the loom over one pick with the shipper handle. The thread cutter is again observed to make sure it is holding and cutting properly and that there is a correct amount of play between the thread cutter's cam and cam follower. The shuttle feeler may be observed for limberneck quickly after completion of inspection of the thread cutter. The crankshaft's position is now adjusted so that the right-hand picker stick has a full stroke. The stroke of the picker is measured along with the height of the lug, the setting of the pick arm on the battery end of the loom and the appearance of the check strap. With the loom in this position the picker and leather in the right-hand or battery-end can be easily observed. The loom is also in good position to easily check the setting of the new shed to the race plate as well as the condition of the lay guide and crank arms. Notice if there is end-play in the rocker shaft.

Using the loom's power, throw the shuttle back to the right-hand end and observe the setting of the box plates and wooden binder with relation to the shuttle entering the box. Inspect the battery for worn disc; worn, loose or lost small end disc bobbin holder (By 3226); proper setting of thread guide; bobbin support; bobbin guide; feed and hold back pawls; excessive play in battery stud; and the top holder arm.

Inspect Loom While Running

The next step in the logical sequence of inspections is to start the loom and observe it while it is running. First



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WARP PREPARATION & WEAVING

look at the shuttle and determine if it is boxing properly. Walk around in back of the loom and observe the let-off motion, beam locks and crank and camshaft bearings. Check the loom brakes by stopping the loom with the warp stop motion. The harness should be level when the loom is stopped in this manner. Return to the front of the loom and break the filling so that the loom will run a few picks before coming to the broken filling on the bobbin. On the filling break, the loom should stop with the shuttle under the battery and the harness level. Take the shuttle out of the box and put the loom up against the protection to see if there is enough friction to choke down the motor. With the loom in this position observations should also be made to see if the distance from the reed to the fell of the cloth is sufficient to prevent smashes in the event the shuttle is trapped in the shed.

Start up the loom again, this time checking the straightness of the warp, setting of the drop wire bars, setting of the drag or whip roll, loose lay swords or rocker shaft and the relative smoothness of the running of the loom. Observe the action of the harness noticing if they are pulling straight. Check the face of the cloth, very carefully, for reed marks, misdraws, over or undershots and misreeds. Notice the selvage's draw and width. If tape selvages are used, a critical examination should be made of the action of the tape motion.

All through the examination of the loom's operation the supervisor should notice if the oilers have done their work properly. Of course, oil is one of the best weapons against machine fatigue. However, too much oil or grease in the right place can seriously affect the cloth produced on the loom. A blob of grease thrown off the cams can get on the warp and ruin many yards of cloth. Oil or grease on the floor is a safety hazard. Oil dripping on the filling in the battery can cause yards and yards of second quality cloth due to oily filling.

When making this inspection, the supervisor is actually supervising the work of other people. He has no more important job. He should have all the information regarding exactly who was responsible for cleaning the loom, tying on the new warp, smashing the warp and placing the loom in operation. Now, when one or more of these operations is not properly performed, the supervisor should call the person or persons responsible back to the loom to make necessary corrections. However, the supervisor cannot know when one of these operations is not right unless he takes the time required to check and inspect the loom thoroughly. With practice, the entire sequence of inspection, as set out here, can be completed in less than five minutes.

It is simple common sense that a new warp which is not started-up properly cannot run properly. On the other hand, there is no assurance that a loom which receives proper inspection and has a good job done on new warp start-up will run the warp out without having trouble of some sort. However, it is a long step in the right direction to take the time to be sure about the loom's condition before placing the new warp in production.

A Japanese mill employee must work about an hour and a quarter to buy a yard of 80-square greige print cloth of his own making. A British mill worker would need about 25 minutes to do this; an American, nine minutes.



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Springs Installs 25 New Slashers

WEST Point Foundry and Machine Co. recently completed one of the largest slasher installations it has ever been called upon to handle—25 slashers, purchased by Springs Cotton Mills. The initial order for 17 multi-cylinder slashers was received in July 1956. Delivery of the first nine-cylinder slasher to the Springs plant at Lancaster, S. C., was made in August 1956. Additional deliveries continued at the rate of approximately three per month.

Following the initial order of 17 slashers, subsequent orders brought the total to 25. Three nine-cylinder slashers went to the Kershaw, S. C., plant; 14 nine-cylinder slashers to the huge Lancaster plant; three nine-cylinder slashers to the Gayle Plant at Chester; one nine-cylinder slasher to the Springsteen Plant at Chester; and four 11-cylinder slashers to the Fort Mill plant.

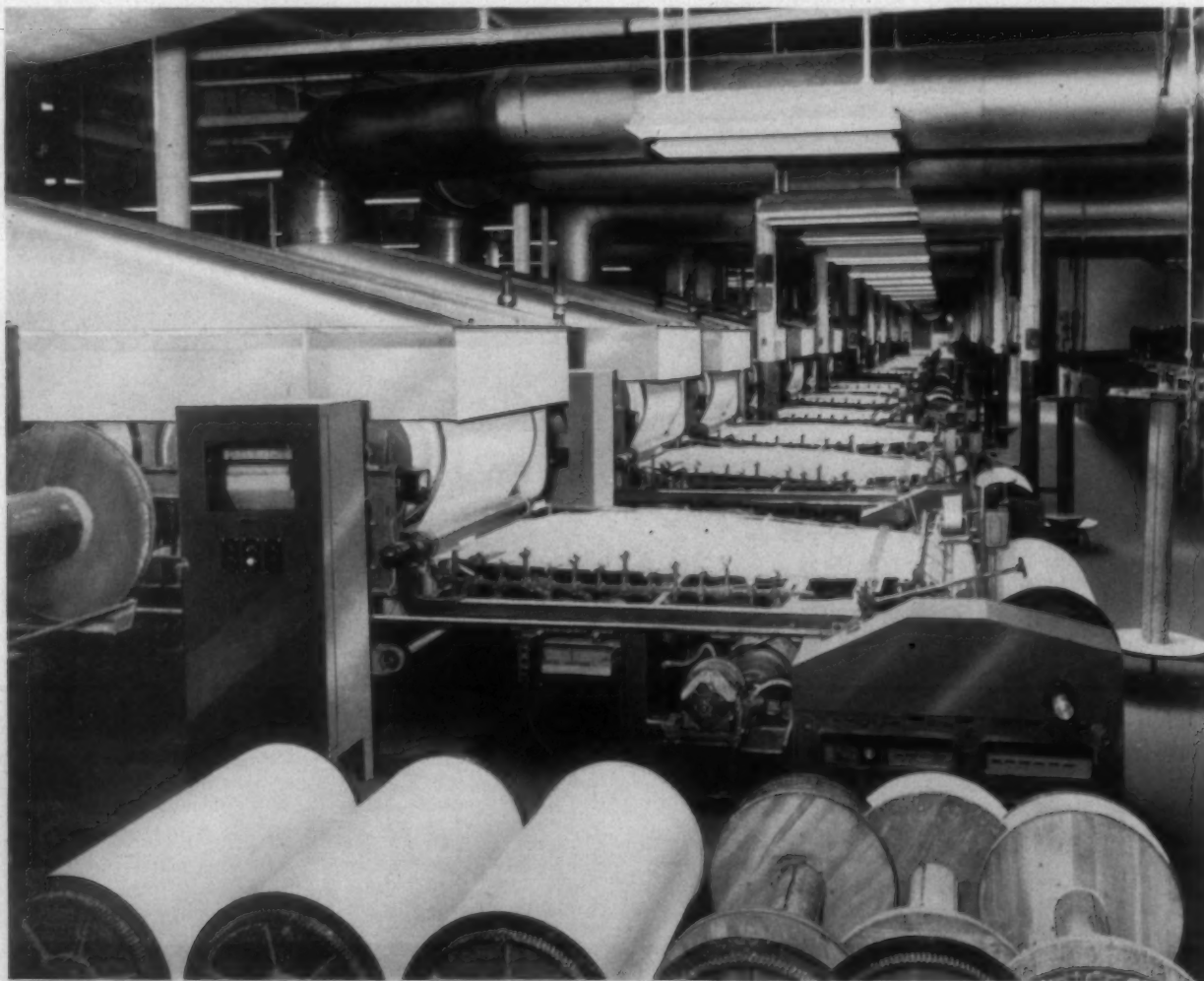
The 25 new slashers replace a total of 32 older slashers, 28 of them big cylinder slashers and four of them hot-air slashers. In addition, the new units will provide slashing capacity for an increase of approximately 1,800 looms in the mills involved. West Point estimates that Springs would have required a total of about 40 slashers of the old type to handle this expansion had these 25 multi-

cylinder slashers not been installed.

At Springs Kershaw plant, the new nine-cylinder slashers slash fine combed yarns (40s and 60s) for Springs' high quality broadcloth at speeds of about 125 yards per minute.

At the Fort Mill plant, the West Point 11-cylinder slashers are slashing what is probably more pounds of warp per hour than ever before recorded. These slashers are slashing warps for Springmaid muslin and percale sheeting at speeds of 110 and 120 yards per minute, which amounts to drying rates of 1,850 and 2,050 pounds per hour. These drying rates are all based on 54½-inch wide warps, although the 11-cylinder slashers are wide enough to slash 72-inch warps, West Point reports. The new slasher installation at Fort Mill is expected to provide even higher drying rates with 72-inch wide warps.

At Springs Lancaster plant, 14 new slashers handle warps for the largest mill under one roof in the world. At the Springsteen Plant in Chester, one multi-cylinder slasher slashes the warp formerly produced by two large three-cylinder slashers. All of the new slashers are equipped with multi-motor drive.



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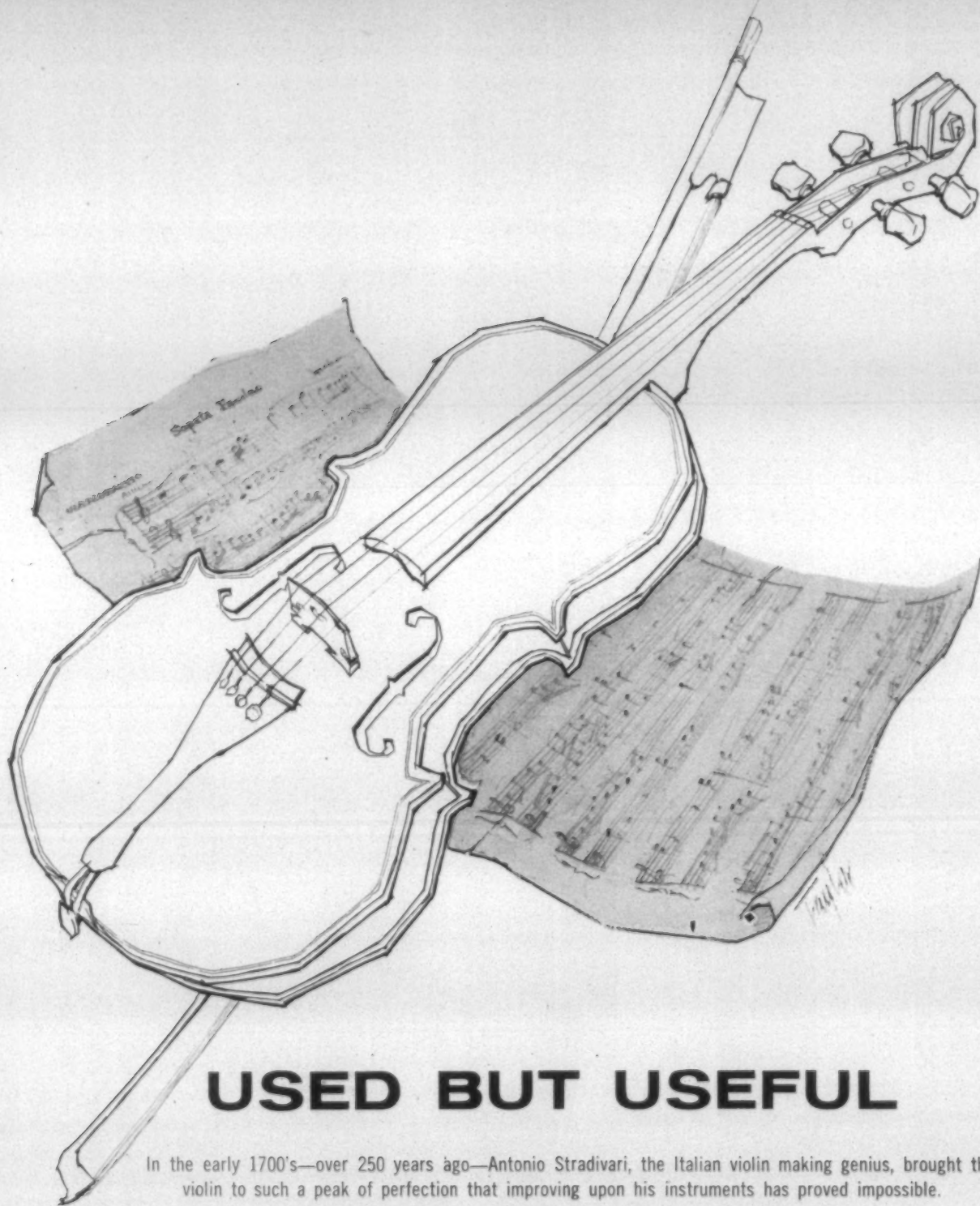
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Bleaching, Dyeing & Finishing

Technical Advances—

Finishing Blends Of Dacron And Cotton

By R. L. HUNTER, Textile Fibers Department, The Du Pont Co., Wilmington, Del.

This paper was presented at the Technical Advances Conference held last April by the electro-chemicals, organic chemicals and textile fibers departments of the Du Pont Co. It outlines in detail pilling control, heat setting, thermal shrinkage, singeing, dimensional stability, mercerizing and many other of the theoretical and practical aspects in the finishing of blends of Dacron and cotton.

FROM one fabric style going into one end use, blends of Dacron with cotton have grown in a scant four years into a whole series of fabric styles penetrating end uses that range from soft, filmy lingerie to heavy, rugged work clothing—and why? Because the combination of strong resilient Dacron with cotton has a versatility which has captured the imagination of the textile industry and satisfied the desires of the consuming public.

Any idea which has grown as rapidly as this one also creates problems. If the increasing consumer demands were to be met, the industry faced a challenge to develop practical processes for spinning, weaving, dyeing and finishing to produce high quality blended fabrics at lowest possible unit cost. Dyeing and finishing members of the industry have done an outstanding job in rising to this challenge. We congratulate them for the open-minded attack they have made. We appreciate the opportunity for co-operating with them in solving these problems as they develop. As fiber producers, we have tried to recognize our responsibility to help as much as we could and we believe that by working together we have made more rapid progress than either of us could have made alone.

Where do we stand today? Certainly from a dyeing and finishing standpoint we know that the challenge referred to has been successfully met. Thermosol dyeing and pressure batch dyeing techniques have demonstrated their ability to produce high quality dyed fabrics, in a range of shades and patterns at lowest possible unit price. Let us review the situation insofar as finishing is concerned.

During the early stages, we speculated that blends of Dacron and cotton could be adapted to the high speed, low unit cost processes used for all-cotton fabrics. Aside from a few special considerations associated with the Dacron in the blend, the same finishing processes that are necessary to produce a high quality cotton fabric would do the same for the blends.

Before exploration of where and how the typical cotton finishing procedure is modified for blends of Dacron and cotton, it may be worthwhile to examine some of the problems peculiar to Dacron and how they are overcome. This may allow a better understanding as to why these modifications are necessary.

Pilling Control

First of all there is pilling. For the sake of review, pilling is a word used to describe the formation of small fuzz balls on the surface of the fabric during wear. There are a lot of complex theories and hypotheses on how and why pilling takes place. The control of pilling has been the subject of many man-years of effort on the part of the Du Pont Co. as well as many other people. Many ideas, some practical and some not so practical, have been evaluated. Several special finishing techniques have been developed in the industry which do a pretty fair job of controlling pilling in fabrics containing Dacron and cotton. Our experience has shown, however, that the two most widely applicable and successful processes for controlling pilling are heat setting and singeing.

Heat-Setting

We found that to be most effective for pilling control, heat setting should be done in the temperature range of 385 to 430° F. The dwell time at these temperatures is not too important since setting takes place almost instantaneously for all practical purposes. Setting can be done on a variety of equipment, including gas-fired clip tenter frames, resin curing ovens, radiant heat units or hot roll contact types of machines. The dwell time for the fiber to reach the setting temperature will vary from one type of equipment to another depending on the efficiency of heat transfer. Generally speaking, the contact and radiant heat machines require less dwell time than hot-air types of units. Fortunately, equipment was available in many finishing plants which could be easily adapted to heat-setting blends of Dacron and cotton. The most common types of equipment found were resin curing ovens or gas-fired clip tenter frames and 30 to 45 seconds exposure time was found generally to be sufficient for the fabric to reach the setting temperature.

Dacron displays a certain amount of what we call thermal shrinkage when exposed to heat which presented a problem

of width control in equipment other than clip tenter frames. We found this could be compensated for on the roller curing ovens, Air-Lay boxes and the contact and radiant type machines by framing the goods to greige width prior to heat setting. The fabric then shrinks during setting to slightly over finished width.

It should be mentioned here that heat-setting at these high temperatures also creates dyeability problems. It has been determined that heat-setting prior to aqueous dyeing reduces the dyeability of Dacron in the range of 275-390° F. Above 390° the dyeability sharply increases. This means that even heat exposure across the fabric must be assured by adequate engineering if shading problems are to be avoided.

In heat-setting after dyeing, dye sublimation is apt to occur at temperatures above 350°. This can lead to shading and over-all shade change if dyes with adequate sublimation fastness are not carefully selected. A significant advance has been made here with the development of the "thermal shock" heat-setting techniques which utilizes radiant heaters operating at 1,200 to 1,400° F. With this unit, fabrics reach a heat-setting temperature of approximately 400 to 420° F. with as little as one second exposure time. This short exposure time eliminates dye sublimation as well as other negatives that might be encountered with conventional heat-setting. A mill-scale machine utilizing these principles has been designed and built and is currently located at the Du Pont Chestnut Run laboratory. Thousands of yards of satisfactorily heat-set fabric have attested to its practicability. We believe it is ideal for heat setting piece dyed or yarn dyed fabrics and are testing promising leads on its application to Thermosol printing and dyeing. Fig. 1 is a schematic sketch of the range. While there are no units operating in the trade, the advantages cited coupled with low investment and operating cost will encourage many mills to adopt this technique in the years to come.

Singeing

In the finishing of cotton fabrics, singeing is used merely to remove long surface fuzz from the face of the fabric as

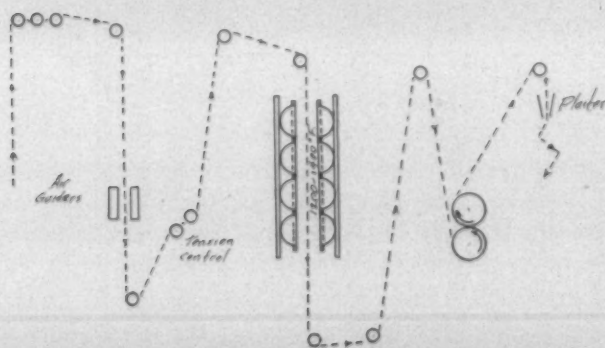


Fig. 1—Sketch of mill-scale range utilizing radiant heaters at temperatures of 1,200-1,400° F. Heat-setting is accomplished with exposure time of as little as one second.

a step in the preparation of the cloth for finishing. However, because of the marked ability of singeing to control the pilling of Dacron, it assumes a much more important role in finishing fabrics containing Dacron and cotton. Because of its critical nature, let us look more closely at this operation. To do a satisfactory job of pilling control, we have found that a deep, close and even singe is very important. Apparently the mechanism here is that the flames fuse back the surface fibers of Dacron. These melt balls, or beads, act as "locks on the doors" to prevent fibers from working their way out and causing trouble during the subsequent wear.

Singeing also contributes to the heat setting of the fabric. Various types of equipment have been used for singeing, the most common type being open flame burners arranged for either horizontal or vertical fabric travel. Recent work in our laboratories on a hot roll singer has proved quite promising.

To be most effective, singeing should be done at the slowest speed possible without degrading the fabric. A low, even flame is the best type since high flames tend to be wild. The high fabric speeds necessary to prevent burning the cloth aggravate this wildness. A double singe has been found to give maximum pilling protection and also minimize the size of the melt balls in the fabric surface. The small size of these melt balls is important to the comfort of the ultimate wearer. One trick which permits the use of lower singeing speeds and higher flames without degrading the cloth is to wet singe. The moisture in the cloth helps to absorb some of the heat but still allows the flame to melt surface fibers.

Design of Singer

Since good singeing is so critical to the production of high quality fabrics of Dacron and cotton, it is of prime importance that the singer be designed to give a close, even singe and that it be maintained in top operating condition. Frequently we have found that the ordinary singer in a cotton finishing plant, while satisfactory for singeing greige cotton cloth, requires much closer control and higher maintenance standards to do a good singeing job on blends of Dacron and cotton. Many yards of fused, dirt-spotted goods can be avoided if this is taken into consideration. Because of this and because it is not desirable to singe fabrics of Dacron and cotton in the greige, for reasons which are explained later, a number of mills are equipped with singers especially suitable for blends of Dacron and cotton employing the principles outlined. While new equipment is initially costly, saving one lot from irrecoverable damage may justify the expense.

Other Pilling Control Methods

Much has been said about heat-setting and singeing for pilling control. This is rightly so because over the years the two treatments have proved their worth as potent weapons against pilling. There are other techniques which have been

How Costly is Old Equipment?

Articles submitted in the contest announced on page 45 will tell the story.

developed that should also be mentioned. Brushing lightweight fabrics or napping and shearing heavier weight cloth ahead of heat-setting and singeing helps to dispose of poorly anchored long fibers which are likely to work loose on the wearer's back. As such, they offer additional help with marginal fabrics. In addition, several secret chemical processes have been developed in the industry which do a highly creditable job of controlling pilling. The Du Pont Co. has also explored the control of pilling through chemical means and has a process which involves padding polyethylene glycol on the desized and scoured but undyed fabric, drying, then curing at 430° F. on a contact heat-setting machine. This PEG process, as it has been nicknamed, does a very good job of eliminating pilling on a wide range of fabric containing Dacron and is particularly applicable to blends of Dacron and cotton. In fact on many styles it has eliminated the need for singeing. Its major drawback is its effect on dyeability. As mentioned earlier, the dyeing properties of Dacron are quite sensitive to its previous thermal history and this treatment seems to magnify this sensitivity. Consequently, for practical purposes, application of the PEG process is limited to white fabrics or to those where only the cotton component is dyed. Furthermore, the additional cost of \$0.01 per yard over regular finishing costs, limits its use to fabrics such as oxfords, basketweaves, etc., where conventional heat-setting and singeing will not produce adequate control of pilling.

Dimensional Stability

Some of the other factors which must be considered in finishing blends of Dacron and cotton do not involve problems as formidable as pilling. Dimensional stability is one of these factors. Since Dacron will shrink upon exposure to heat, serious shrinking problems in laundering or pressing garments can be avoided by adequate heat-setting in finishing. Thus heat-setting serves a dual purpose in controlling both dimensional stability and pilling. Heat-setting at a temperature 50° higher than the subsequent heat exposure to be expected in garment use is usually a safe rule to follow.

Heat-setting does not compensate entirely for the shrinkage of the cotton component in washing and unless fabrics of Dacron and cotton are handled completely relaxed through finishing about four per cent residual shrinkage by the CCT-191-b test will result. Thus, the classic means well known for controlling dimensional stability on all-cotton fabrics are put to work on fabrics of Dacron and cotton—these are mercerizing, resin treatment and compressive shrinking. These operations affect only the cotton component, and must be combined with heat-setting to provide adequate dimensional stability of the blend. Tests have shown that the combination of heat-setting at 380-400°F. with mercerizing and compressive shrinking will produce fabrics whose performance under washing is really better than that obtainable on all-cotton fabrics.

Alkaline Sensitivity

The alkaline sensitivity of Dacron is somewhat greater than that of cotton. The mechanism here is this. Polyethylene terephthalate is hydrolyzed by strong alkali and the product of this hydrolysis is soluble in water. Fibers of Dacron are not degraded by alkali but are gradually reduced in denier until they are completely dissolved, at a rate which

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is determined by the time and temperature of exposure and the concentration of alkali. Fig. 2 shows the relationship among the three factors and the areas where Dacron is little affected strength-wise.

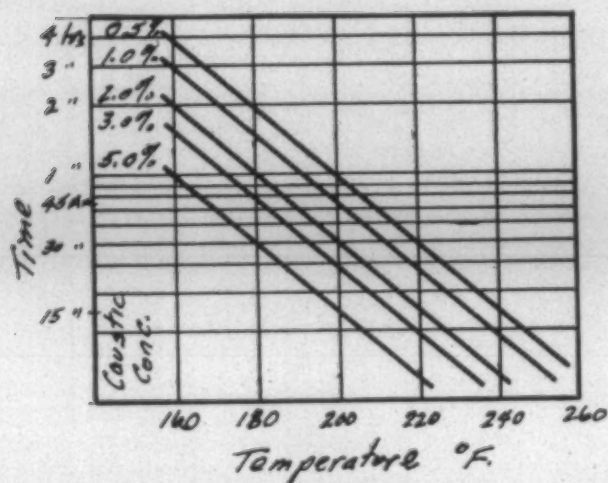


Fig. 2—Graphic illustration of the relationship among the factors of time, temperature and caustic concentration.

This factor is important in finishing blends of Dacron and cotton since many cotton finishing operations involve the use of strong alkalis. Processes such as keir boiling with strong caustic solution for mote removal are done under such conditions as to be very harmful to Dacron and should be avoided. On the other hand, Du Pont Solo-Matic bleaching or even two-stage J-Box bleaching can be done much more safely, even though they involve a somewhat high pH and high temperatures. Under these circumstances, the absorbency of the cotton comes to our rescue, by soaking up the caustic and keeping the surface hydrolysis of the Dacron to a minimum. Please note that samples should be tested under the actual conditions existing in a particular plant before large yardages are committed to assure no serious strength loss.

Mercerizing has been mentioned here several times. It should be pointed out that while very strong caustic is used here, the times and temperatures of exposure are so low that fiber strength loss is negligible.

Routing Comparison

A comparison of the routing of the fabrics to various phases of finishing can be summed up in one sentence. Except for a change in the order of singeing and the addition of heat-setting, the blend fabrics are processed by a normal cotton routine at conventional speeds. Normal cotton routine puts singeing first in the line and does not contain heat-setting. Dacron/cotton blends are desized, scoured and mercerized before heat-setting which is followed by singeing.

Many people ask, "why eliminate the greige singe?" Actually many mills do greige singe but we believe it is generally a dangerous practice for these reasons:

(1) The sizes, oils, grease and mill dirt can very easily be set into the cloth if exposed to heat. Once set, they are very difficult to remove.

(2) Loom non-uniformities and reediness can also be set into cloth by singeing and are very difficult to even-out in subsequent wet processing.

(3) The greige singe contributes little toward pilling control since the size film protects the long fibers from the flames. Thus, singeing for pilling control is much more effective if done after the size is removed. This is the reason we have located singeing just prior to bleaching.

Rope soaping is a fairly straightforward process commonly used for all cotton fabrics but we have found added benefits in its use for blends of Dacron and cotton. When done in a modified dolly washer at temperatures approaching the boil, a considerable amount of evening-out takes place. Reed marks are minimized and a much better appearing fabric results. This is true particularly in broad-cloths and poplins.

Mercerizing

Mercerizing is beneficial to the blend because it improves the absorbency and hand of the blended fabric. Dimensional stability and luster is also improved by the process. Tests have indicated that mercerizing in the greige will efficiently remove many of the heavy sizing and wax deposits that are put on the warps to make them weave better and which frequently give the finisher much trouble.

If heat-setting is to be done on equipment where no width control is provided, framing before heat-setting is done at greige width to control the final finished width. Framing will not be necessary and setting can be carried out one-half to one inch over final finished width if setting is to be done on gas-fired clip tenter frames.

It has been found that standard peroxide bleaching either in a kier or a J-Box will do a satisfactory job on the blend. Peroxide will not bleach Dacron to any extent, however, Dacron is white as manufactured and does not require bleaching. Incidentally, it is very important to heat-set the goods before bleaching by these methods to prevent forming permanent creases in the fabric during bleaching.

Pastel shades of excellent quality, appearance and fastness can be vat dyed after bleaching by any of the standard methods. Blueing and/or fluorescent white dyes that are substantive to Dacron, which have recently come on the market, have also shown promise. Finishes such as cationic softeners can be applied during frame finishing which is followed by compressive shrinking.

Medium or Dark Shades

If the Dacron is to be dyed to medium or dark shades, a slightly different routing is suggested. Let us first consider fabrics that are dyed by conventional carrier dyeing or pressure piece dyeing methods. The recommended sequence is shown in Fig. 3. Dyeing of the Dacron prior to heat-setting or singeing is suggested to minimize the effect of heat on dyeability. Singeing in particular is to be avoided prior to dyeing since the tiny melt balls on the surface of the fabric absorb dye readily and give the fabric a specked, unlevel appearance. Bleaching is done only if the shade is such that a bleached bottom will produce a better over-all appearance.

When Thermosol piece dyeing is used, the sequence shown in Fig. 4 is suggested. This method offers advantages over conventional dyeing in that heat-setting and dyeing are simultaneous. Yarn-dyed goods are handled in a man-

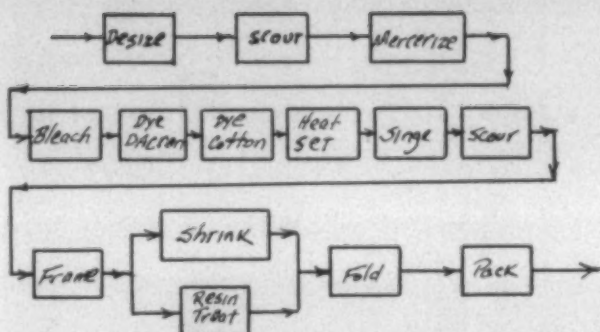


Fig. 3—Flow diagram of the recommended sequence in dyeing Dacron to medium or dark shades. The dyeing is done prior to heat-setting or singeing in order to minimize the effect of the heat on dyeability.

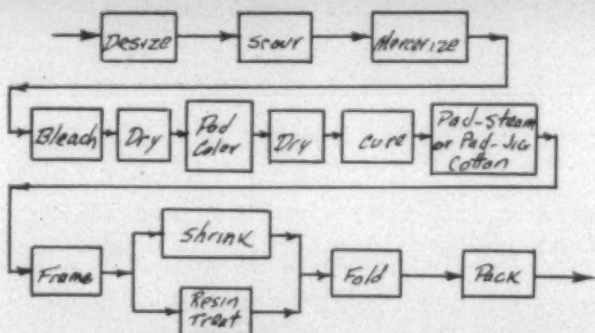


Fig. 4—The Dacron dyeing sequence when Thermosol piece dyeing is used. This method offers advantages over conventional dyeing in that heat-setting and dyeing are simultaneous.

ner similar to whites. However, heat-setting temperatures on hot-air or contact machines should be kept below 350°F. to minimize dye sublimation. Yarn-dyed fabrics can be bleached with either chemic or with peroxide.

Special Techniques

Several special techniques have found particular application in finishing blends of Dacron and cotton. By employing the thermoplastic properties of Dacron, extra mileage can be gotten out of the calendering process. Schreiner or plain calendering with 30 tons of pressure at 350. to 375°F. prior to heat-setting will produce a fabric with better cover, better uniformity and a certain amount of durable luster. Embossing can be done at 30 tons nip pressure at this temperature on completely finished heat-set fabrics with excellent durability. This is because Dacron, unlike nylon, is quite thermoplastic and can be reformed and remolded at will, even after being heat-set in a flat condition. This property also permits the formation of permanent pleats by normal pleating processes on completely finished goods. This is a distinct advantage to the converter and cutter.

Resin treatment of Dacron and cotton blends have shown good results. The resin application provides a "wash and wear" characteristic to these blends which we have found to be second to none. This is due mainly because the initial resilience of the cotton component is brought up to that of the Dacron. Aside from this, losses in tensile strength of the blend fabrics are negligible since the Dacron is unaffected by the resin. While durability of this treatment is the same as it would be on all-cotton, the "wash and wear" performance obviously can never get below that



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built into the fabric. One of the best formulations is a combination of four to five per cent of Zeset S fabric stabilizer on weight of fabric with one and one-half to two per cent Nalan RF durable water repellent. Crease angle recovery has been increased up to 15 per cent on a given construction by using this formulation. Resins also impart a degree of pilling resistance and as adjuncts to good mechanical finishing are quite effective. However, resins should not be depended upon entirely for pilling control since the effect is not durable for the life of the garment.

Quality Control

No discussion of finishing would be complete without some mention of quality control which always is an important facet to the dyers and finishers service. Here again, the usual quality factors measured for all-cotton fabrics are paralleled when considering blends of Dacron and cotton. Such parameters as dimensional stability, colorfastness and fabric strength are determined in the blend in the same manner as they would for their all-cotton counterparts. However, one additional factor should be measured

and this is pilling resistance which can be done by one of two methods—the Brush and Sponge test or the Random Tumble test. The former is a method which has been in use for a number of years and no doubt is familiar to most finishers. This method, while subject to many variables as are most laboratory tests, is still the best one to indicate the resistance of fabrics to pilling around the collar of a dress shirt. It is also useful for comparing the relative pilling resistance of fabrics finished by various routings and techniques.

The Random Tumble pilling tester, recently developed by Du Pont, employs an entirely different mechanism from the Brush and Sponge tester and has been found quite useful for predicting pilling (other than collar pilling) during garment wear. All pilling, both in size and quantity produced by this tester correlates quite well with the pilling actually found on the body of the same fabric in wear tests.

We have seen that the rapid growth of blends of Dacron and cotton has provided the opportunity for business in large yardages that can be dyed and finished with only slight modifications of the high speed, economical methods employed for similar all-cotton fabrics. By adapting these methods to the blend fabrics of Dacron and cotton, we have insured a continually growing supply of high quality fabrics for the consumer at salable unit prices. This will in turn insure profits for us all in the years to come.

A. A. T. T. Report

New, Highly Durable Anti-Static Finishes

By DR. EMERY I. VALKO, Director of Research, and DR. GIULIANA C. TESORO,
Assistant Director of Research, Onyx Oil & Chemical Co., Jersey City, N. J.

This article, which is extracted from a speech delivered before the American Association For Textile Technology in June, points out the merits of two of the new highly durable anti-static finishes. Apparently it is easy to find compounds which impart anti-static effects but the difficulty is that most of these compounds have one or a combination of the objectionable features outlined here.

STATIC electricity is the phenomenon of a body being electrically charged and is basic in nature. Static was first noted by an early Greek mathematician some 25 centuries ago. He discovered that an amber rod would attract small particles after the rod had been rubbed with an animal fur. Amber is, of course, well known and is a very old, essentially natural, polyester resin. Twenty centuries later, Benjamin Franklin noted that a body which had been electrified, when left in a room with other like bodies,

would gather more dust than the other bodies. The dust was attracted from the surrounding air.

Synthetics Tend To Accumulate Static

Synthetic fibers, which generally are rather close kin to amber, have shown the distinct tendency to attract electrical charges more so than natural fibers. This is the case because man-made fibers have a greater resistance to the conduction of electrical charges. The moisture content of the fiber is the reason behind these properties. Natural fibers attract water in greater amounts or may be said to be more hygroscopic than synthetics. When absolutely dry, natural fibers have considerably more resistance to electrical charges.

In order to eliminate the tendency of synthetic fibers to accumulate electric charges, two methods seem open. One is that the fiber's tendency to generate charges must be suppressed. The other method is to reduce the fiber's tendency to hold the charge. The work outlined here has been directed at this second avenue of reducing the accumulation of static charges.

To Superintendents
and other Operating
Personnel:

**How Has Modern Equipment
Helped You Do a Better Job?**

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\$50.00 or \$25.00 by
giving us the facts.
See page 45.

It is comparatively easy to locate compounds which impart an anti-static effect. However, it is not so easy to find the product which imparts anti-static effect and does not give objectionable factors also. Among the most important of these objectionable factors are that the compound should not: (1) be removed from the fabric by mechanical or chemical breakdown particularly in laundering and dry cleaning; (2) discolor the fabric; (3) impart an undesirable hand to the fabric; (4) require impractical application conditions; and (5) be so expensive as to become uneconomical. In order to fulfill these requirements, it was necessary to embark on a selective breeding of polymeric families by chemical synthesis. The result of this work is Aston.

Aston LT and Aston 108 are chemical compounds which fit the description of "hygroscopic polyelectrolytes" and are manufactured by the Onyx Oil & Chemical Co. They are compounds which have proved their efficiency in terms of both performance and usefulness. They are water soluble polymers, applied from an aqueous solution in combination with a curing agent which is actually a reagent designed to cross-link and render insoluble the soluble polymer during curing. This insoluble resin is formed on the fabric which has been padded with the solution under conditions similar to the ones in effect when using other heat-setting resins, such as the urea-formaldehyde type.

Durability Of The Finish

The durability rating of the products has been based on the following considerations: (1) conductance measurements after a given number of washings (at 140°F. for 40 minutes with Tide); (2) Standard A.A.T.C.C. accelerated wash tests, which are satisfactory only as a relative measure of performance; and (3) resin retention studies which are carried out by weight difference methods and by a staining technique. The brutal beating of the fabric by the steel balls in the accelerated washing process introduces, or at least emphasizes, a microscopic non-uniformity of the wear-off of the resin which does not occur in the regular test or actual practice.

Generally speaking, if two per cent Aston is applied to a fabric woven of any synthetic fiber, and the fabric is dried at 210°F., cured three minutes at 300°F. and rinsed, the finish obtained will be durable to 20 to 80 machine launderings at 140°F.

Effect Of Various Factors On The Finish

While there is probably no chemical interaction between the anti-static finish and the fiber, the nature of the fiber has very definite effect upon the durability of the resin. It was observed, for instance, that some products were durable on Dacron and not on nylon, others were durable on Acrylic fibers only. Aston LT happens to be less specific in its effect than any other anti-static finish studied. It is effective to some degree on all man-made fibers but this effectiveness varies depending upon the chemical characteristics of the fiber.

The effect of fabric construction on durability is extremely important. Woven fabrics give better results than knitted fabrics. Heavy fabrics give better results than sheer fabrics. When the durability of identical treatments on woven and knitted Dacron or on woven and knitted nylon is compared, a significant difference which can be attributed largely

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to construction is observed. Similarly, spun fabrics give better results than filament fabrics.

The effect of the amount of resin applied on the durability of the finish can be expressed in quantitative terms. If all other conditions are constant (fiber, construction, ratio of crosslinking agent, pH, curing time and temperature), the durability increases with the amount of resin applied. A portion of the finish is removed with each laundering and the conductance of the treated fabric drops below the acceptable level if the amount of resin remaining on the fabric drops below the minimum.

The reaction between the soluble polymer and the crosslinking agent takes place more readily under strongly alkaline conditions. In view of this fact, for a specific time and temperature of application, the level of durability rises with the pH of the bath. Optimum durability is reached when the pH is 10.5 to 11.0. It is true, however, that if other conditions are changed, satisfactory levels of durability can be attained at somewhat lower pH.

Variations in the curing time and temperature greatly influence the amount of resin remaining on the fabric after rinsing. These considerations are decreased in latitude by the necessity of keeping the processing on a practical basis. The best procedure is found by a careful balance of all factors involved.

Color is another element which is influenced by the addition of anti-static finishes. Aston LT and Aston 108 show some tendency to reduce the reflectance of white fabrics. To reduce this trait in some cases it may be necessary

to adjust the level of durability of the finish. Discoloration of the fabric becomes larger as greater amounts of the solution of Aston is applied. The characteristics of the fibers with which the fabric is made also has an effect on the amount of discoloration. As previously seen, it is necessary to balance several factors involved in order to get the best finish.

Fabrics treated with Aston LT and with Aston 108 should not be dry cleaned in "high charge" systems. While the anti-static finish is not removed, its effect is masked by an insulating deposit.

In tests run on fabrics which had been treated with Aston LT and Aston 108 for light fastness of dyes, gas fading properties of dyes, wash fastness of dyes, tensile strength, tear strength and abrasion resistance, no unfavorable results were found. This is true, except for a slight decrease in tensile strength (Aston 108 on Dacron) and a slight decrease in tear strength (Aston LT on Arnel).

Fabrics treated with the finishes under discussion may not be bleached with chemicals. Oxygen and chlorine bleaches tend to remove the finish at varying rates depending on the volumes which are in use. Of course, the practical application of the finish is thereby limited. However, there is no method immediately available to make this process possible.

Single applications of the durable anti-static finish and water repellency have not been made possible as yet. However, it is possible to complete both operations separately. This is also the case with other textile finishing processes in combination with the durable anti-static finish. They can both be completed even though it may be often necessary to require separate applications.

Maintenance, Engineering & Handling

Industrial Electronics—

THE MAINTENANCE PROBLEM

By C. R. WHITNEY, Industrial Controller Division, The Square D Co., Milwaukee, Wisc.

This article points out that a trouble shooter, or maintenance man, must first understand the trouble before he can set about to repair it. A systematic approach to maintenance problems is outlined, which if followed will make the repair operation simple to perform.

THE average maintenance man has become well versed in the functions of magnetic relays, mechanical limit switches, push buttons, pilot lights and other conventional automatic control components. The seemingly unlimited possibilities in the application of electronics, magnetics, etc. to industrial control systems, however, present

a challenge to all maintenance engineers. We must meet this challenge in order to reap the benefits.

The most important single function of a maintenance man (trouble shooter) is to understand the trouble. If the trouble shooter will take time to completely understand what has gone wrong with the machine, he will not only place himself in a better position to solve the problem but will be able to carry on an intelligent and revealing conversation with the manufacturer, if a telephone call becomes necessary. In line with understanding the trouble, the following points are important:

(1) The trouble shooter should definitely establish the time or point in a normal sequence at which failure occurs. (2) The trouble shooter should definitely establish

that the trouble is not due to a mechanical failure of electrical components external to the control enclosure before he explores the complexity of that enclosure. More specifically, the input devices such as limit switches, foot switches, push buttons, etc. should be examined for mechanical failure first. (3) The trouble shooter should definitely establish that the failure is not due to jamming or mechanical failure of the machine itself. (4) The trouble shooter should definitely establish that the power supply is intact.

Isolate The Trouble

After he has had an opportunity to thoroughly understand the malfunction, it is the responsibility of the trouble shooter to isolate the trouble. This can be done in a number of ways, depending upon the makeup of the control equipment and the trouble shooting instructions available. The most important thing, however, is that it be done in a systematic fashion. A few basic things should be known about electronic components. They are as follows:

(1) Gas-filled thyratrons are used extensively in industrial control for sequencing or switching applications. They act as electronic switches, and functionally are either on (conducting) or off (not conducting). These tubes vary from the small 2050 type for internal sequencing functions to the larger Type C3Js for energizing solenoid valves and power contactor coils, up to large ignitrons capable of carrying thousands of amperes. The function of gas tubes is easy to check since they glow (blue) when they conduct current.

(2) Ruggedized vacuum tubes are used in industrial control equipment for clipping, coupling, charging capacitors or amplifying. Energization of the filament is visible in the tube as a red dot, as is the case with the small gas-filled thyratrons. It is impossible, however, to check the function of a vacuum tube without instruments.

(3) Small resistors are used extensively in most electronic equipment. These resistors can be checked for overheating by noticing the color coding which should be very brilliant. Fading or charring of the colors indicates excessive heat and possible failure. Higher wattage resistors have no color bands. A good way to check higher wattage resistors is to touch them with a wetted finger tip. They usually operate very warm but not hot enough to cause steaming of the moisture.

(4) Both ceramic-type and oil-filled capacitors are used in industrial electronic equipment. Ceramic capacitors are difficult, if not impossible, to check without instruments. Oil-filled capacitors, however, will invariably leak, swell or bubble if they fail.

(5) Selenium dry rectifiers consist of a stack of small flat plates or, in some cases, a cartridge similar to a large resistor. Failure is usually not visible, but your sense of smell comes in handy. Bad selenium rectifiers give off a very offensive odor.

(6) Transformers can be checked for overheating by touching the winding. The winding will be warm but not hot enough to be uncomfortable. The laminations will, in most instances, be warmer than the windings.

(7) Terminal blocks and tube sockets are usually not sources of trouble as such. The fact that they represent electrical connections, however, make them important to the maintenance man or trouble shooter. After the obvious visual (and sense of smell) inspection suggested in the

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previous items is completed, the trouble shooter should touch each lead at the terminal block or tube socket to insure continuity of connection. All screw-type connections should be tightened and solder connections should be inspected mechanically. Also, it is important that each tube pin connector be visually inspected for breakage.

The above list includes all of the components normally used in an electronic control circuit. Our experience has shown that organized inspection such as indicated above will in 99 per cent of the cases, locate component failures. In other words, 99 per cent of your problems can be solved by teaching your maintenance people to use their God-given senses of sight, feel, smell and old-fashioned horse sense.

Twenty years ago, a piece of industrial electronic equipment looked exactly like the "insides" of a \$19.95 table radio today. The component mounting and interwiring has aptly been described as a "rat's nest." Industrial clearances were not adhered to, electronic components were loaded beyond their normal capacities, and trouble shooting was an absolute impossibility. It is unfortunate that the industry got its start in this manner, since it was set back many years by virtue of the fact that the devices were unreliable for industrial application.

Evolution In Design

Competition and user pressure have, however, caused an evolution in the method of designing and packaging electronic equipment. Electronic components are mounted across terminals and are kept as nearly as possible in line with each other so that they can be pictorially separated. Also, the components are of rugged, industrial design, as compared to that originally found in radio circuits. The wiring is probably the most important change, in that today nearly all industrial wiring is neatly "cabled" into a wiring harness. Thus, neatness has become a byword in the design and packaging of industrial electronic control. It enhances the dissemination of service information and, consequently, minimizes the maintenance problem.

Another important step has been the physical placement of functions of an electronic control panel into specific areas in the package. In so doing, it was possible to diagram the cycle of operation of a piece of equipment in such a manner as to tie each element of the electronic control down to a specific function of the driven machinery. The functional chart actually explains the complete sequence of the operation, a task which would take several pages of words.

Future Designs

The next step, now taking place, is even more revolutionary, although a little thought makes it obvious. The functional diagram and assembly approach make it possible for a trouble shooter to localize the trouble fairly quickly. The only problem remaining, therefore, is to

make it simple for him to replace the troublesome component. Very often the exact position of an electronic component is of some importance because of electrical pickup. In other cases, voltage clearances may be critical. In most cases, it is necessary to make a good electrical solder connection, a difficult thing without the proper equipment. At the same time, small electronic components such as resistors and capacitors are inexpensive when compared to the cost of down-time in the modern production plant.

Why not, therefore, take each function of the unit as outlined in the functional diagram, and completely encapsulate all of its components in plastic or some other insulating material? This is exactly what is being done in some of the new industrial electronic designs today. These completely encapsulated functions are usually made "plug-in" and contain an electronic tube as an integral part. The trouble shooter can follow the sequence of a machine from function to function until actual failure occurs. The obvious solution then is to remove the erratic function and plug in a new one.

Although the functional approach is now on the drawing board, it will, undoubtedly, be some years before it is in general use. In the meantime, you can help yourselves by teaching your maintenance people to use an organized, common sense approach to trouble shooting. You, and they, will be amazed at how simple the job really is.

Two-Year Textile Course Introduced

A shortage of trained manpower in Georgia's textile industry has led to the initiation of a new two-year textile course at the Southern Technical Institute, Chamblee, Ga. The course, which will be available for students this Fall, is being established following ten years of advocacy and urging by Georgia textile leaders through the Textile Education Foundation Inc.

To accommodate the new program, a department of textile technology will be set up at Southern Tech, a unit of the Georgia Tech engineering extension division. In addition to the departmental staff, to be headed by John I. Alford, a former superintendent of Covington (Ga.) Mills, students enrolling in this course will utilize the faculty and facilities of the A. French School of Textiles at Georgia Tech.

Designed to fill the growing need for textile technicians, the course will be especially attractive to textile companies who desire further training for selected employees who have the potential to develop into supervisors. The curriculum is a combination of practical experience with machines and classroom science and theory. Specialized studies will deal with raw materials, spinning, weaving, fabric design and analysis, dyeing and other standard textile subjects. On the academic side, there will be mathematics, physics, English composition and public speaking. Related subjects include time and motion studies, cost accounting, safety, human relations and methods improvement. Upon the successful completion of the course, graduates will be awarded a degree of associate in science in textile technology.

Does Modern Equipment Cut Costs?

**Superintendents and other
operating personnel KNOW!**

See page 45.

Promotions, Resignations, Honors,
Transfers, Appointments, Elections,
Civic and Associational Activities

PERSONAL NEWS



Robert V. Lee

Robert V. (Bob) Lee has been named district sales manager in North Carolina, South Carolina and Virginia for West Point (Ga.) Foundry & Machine Co. Mr. Lee, formerly a sales representative for the firm in both Spartanburg, S. C., and Concord, N. C., joined West Point in 1946. He was assigned to the sales department at Spartanburg in 1954, transferring to Concord in 1955. He will continue to make his headquarters in Concord.

A. H. Grant, chief development engineer of the North Carolina Department of Conservation and Development since 1955, has resigned to join Morgan Cotton Mills, Laurel Hill, N. C.

Edgar M. Norris has been elected president and treasurer of Norris Cotton Mills Co., Catechee, S. C., succeeding G. F. Norris who has been named chairman of the firm's board of directors. . . . R. A. Taylor, formerly superintendent, has been elected vice-president in charge of manufacturing, and has been named a director of the firm.

Sidney Bluhm, former buyer for Cone Mills Corp., Greensboro, N. C., has been elected a life member of the buyers and classifiers division of the North Carolina Textile Manufacturers Association in recognition for his work for the association.



William H. Johnson

William H. Johnson has been named manager of quality control for Goodyear Tire & Rubber Co.'s textile mills at Cedartown, Rockmart and Cartersville in Georgia, and in Decatur, Ala. A native of Rome, Ga., Mr. Johnson joined Goodyear at its Cartersville plant after studying textiles at Georgia Tech. He served as a section man, laboratory manager and shift superintendent before being named manager of supervisory training for the company's textile division in 1950. He will make his headquarters at Cartersville, Ga.

J. Ralph Johnson has been named assistant superintendent of the Startex (S. C.) Division of Spartan Mills. Mr. Johnson,

formerly an overseer at the plant, succeeds J. P. Carter who was recently promoted to superintendent.

Joseph Mitchell has been named personnel manager of the Pineville (N. C.) Plant of Cone Mills Corp., Greensboro, N. C. Mr. Mitchell, who has been with Cone for the past eight years, succeeds Hoyt Wigenton.

Flay E. Alexander has been named superintendent of the Whitmire (S. C.) Plant of J. P. Stevens & Co. Inc. He succeeds J. J. Frier, who retired recently after 25 years with the company.



Edward J. Bullard

Edward J. Bullard, president and treasurer of The Bullard Clark Co. of Danielson, Conn., and Charlotte, N. C., has been elected chairman of the firm's board of directors. Mr. Bullard has been associated with the organization for over 27 years. . . .

Succeeding him as president and treasurer is Jack D. Lodge, formerly vice-president and secretary. Other executive shifts include the promotion of J. Edgar Moe, general manager of the Jacobs Rubber Division and former vice-president, to the post of execu-



William R. Muller

tive vice-president and secretary of The Bullard Clark Co. The post of executive vice-president was recently made vacant by the resignation of B. T. Clark who has retired after 25 years' service because of ill health. In addition to continuing as sales manager for the company's textile divisions, Vice-President William R. Muller has been named division manager of E. H. Jacobs Northern Division.

W. H. Stallworth Jr., chief engineer of Deering, Milliken's Excelsior Mills at Union, S. C., has been promoted to production superintendent of the company's Hatch Mill Corp., Columbus, N. C. Robert

H. Jones, formerly superintendent at Columbus, was recently named manager of Kingstree (S. C.) Mfg. Co.

C. W. Bendigo has resigned as technical director of the fibers division of American Cyanamid Co. Mr. Bendigo was named technical director of the division in 1956. Prior to that he headed the fiber market development activities of the firm.



Richard L. Barnard

Richard L. Barnard has been appointed a Southern representative for David Gessner Co., Worcester, Mass., manufacturer of cloth finishing machinery. Mr. Barnard is in charge of the new Gessner office opened recently in Greensboro, N. C. Mr. Barnard joined Gessner in 1949. . . . Paul F. Riedl, Gessner service representative and erector, has also moved to Greensboro and will make his headquarters in the same office.

Hugh M. Comer, chairman of the board of Avondale Mills, Sylacauga, Ala., was recently named winner of the first Safety Crusade Certificate of Commendation in Alabama for his work for traffic safety. Mr. Comer has served as president of the Alabama Safety Council since 1953.

J. D. W. Hubbeling, formerly chief chemist at the Lowland, Tenn., plant of American Enka Corp., has been named director of processes for the company. Mr. Hubbeling, who will make his headquarters at Enka, N. C., joined the firm in 1952. He was named chief chemist at the Lowland plant in 1946.

Lester Prink has been elected a vice-president of John P. Maguire & Co. Mr. Prink was formerly secretary for the firm. Edward J. Cunningham, vice-president, has assumed the additional office of secretary, succeeding Mr. Prink.

W. A. Spell has been named superintendent of The Mary Leila Cotton Mills, Greensboro, Ga. Mr. Spell succeeds the late George W. Murphy, who died last month.

Gaston Jennings has been appointed assistant general manager of Group No. 1 of the cotton and spun fibers division of J. P. Stevens & Co. Inc., which comprises the Monaghan Plant at Greenville, S. C., and the Greer and Victor Plants at Greer,

PERSONAL NEWS

S. C. Mr. Jennings has been with the company since 1939.

Golden Belt Mfg. Co., Durham, N. C., has announced the following promotions: C. M. Davis has been promoted from vice-president to senior vice-president; S. B. Rasberry, superintendent of the bag mill and printing department, has been elected vice-president; and R. M. McFarland, foreman of the printing department, has been named superintendent of that department.

John Koppen, superintendent of Threads Inc., Gastonia, N. C., has been installed as president of the Gastonia Civitan Club.

Arthur G. Corkery, former assistant vice-president of American & Efrid Mills, Mount Holly, N. C., has been named manager of the new business department of Crompton-Richmond Co.

Mark B. Eubanks has been named director of purchasing and transportation for Riegel Textile Corp., Trion, Ga., and Ware Shoals, S. C. Mr. Eubanks joined Riegel in 1930, and has been purchasing agent since 1946.

T. B. Jackson, manager of the Industrial and Aragon Baldwin Plants of J. P. Stevens & Co. at Rock Hill, S. C., has been elected president of the Rock Hill Community Council, a newly-formed community group. Named a director and treasurer was Durward Costner, general superintendent and

vice-president of the Rock Hill Printing & Finishing Co. Louis Amato, personnel director of the Celriver Plant of Celanese Corp. of America was also named a director.

Bruce C. Baker, general superintendent of the Capital City, Granby, Olympia and Richland Plants of Pacific Columbia Mills, Columbia, S. C., retired July 1. Mr. Baker, a graduate of North Carolina State College, joined Pacific in 1948. Prior to that he had been associated for 26 years with Springs Cotton Mills in various capacities, including assignments as manager of Springs Kershaw, S. C., plant and the three Springs plants in Chester, S. C.

Guy L. Britt has joined the sales staff of Johnson Motor Lines as assistant general sales manager. A native of Cairo, Ga., Mr. Britt has been associated with motor freight transportation since 1939. He recently resigned as director of sales for Hennis Freight Lines, Winston-Salem, N. C.

Frederick T. Hopkins has been named sales manager of industrial yarns and fabrics for the textile division of U. S. Rubber Co. He succeeds Albert W. Hansen, who has retired. Mr. Hopkins has been with the company since 1937.

Charles Edward Heaton has joined the Celanese Corp. of America as a textile development engineer in the company's development laboratories at Charlotte, N. C. In his new post, Mr. Heaton—formerly with the Luray (Va.) Division of Schwar-

zenbach Huber Co.—will be engaged in trial planning and scheduling in connection with the evaluation of Celanese fibers and blends. A graduate of Clemson College, Mr. Heaton also holds a Master's degree from the University of South Carolina.



James I. Wright

James I. Wright has been appointed to the position of consultant by the Mac Chemical Co. of Knoxville, Tenn. Mr. Wright is a graduate of the University of North Carolina and has had more than 12 years' experience in various phases of textile manufacturing. He has previously been associated with the Standard Knitting Mills Inc. and United Hosiery Mills Corp.

Gerald De Angelis, a credit executive with Burlington Industries since 1945, has joined the old-line factoring firm of Meinhard & Co. Inc., New York City. He will be a senior credit man in the wholesale division of the company's credit department.

J. Harold Lineberger, prominent Belmont, N. C., textile leader, has been elected chairman of the board of trustees of the North Carolina Vocational Textile School, Belmont, N. C.

W. Richard Cake has been appointed general manager of Alliance Color & Chemical Co. of Newark, N. J., a division of The Andover Co. Mr. Cake, a graduate of Franklin and Marshall College, was formerly with Heyden Chemical Corp.

Albert O. Silverman has been named an assistant vice-president of Commercial Factors Corp., old-line factoring firm of New York City. Mr. Silverman was formerly a partner in the Mercury Yarn Co.

James R. Wright has joined the Uster Corp., Charlotte, N. C., as a product engineer in the testing equipment department. Mr. Wright was formerly with Burlington Industries, and until his connection with Uster, was superintendent of the novelty yarns plant of Craftspun Yarns Inc.

John S. Gebbie has been named a sales representative in the Greenville, S. C., office of Armstrong Cork Co.'s industrial division. In his new post, Mr. Gebbie will offer Armstrong's complete line of textile mill supplies.

James R. Hill has been promoted to manager of the Atlanta, Ga., branch of the mill starch division of Corn Products Sales Co. Mr. Hill, a graduate of North Carolina State College, was formerly with Cone Mills Corp. He joined Corn Products in 1946 as a chemist in the company's Argo, Ill., plant. Prior to his promotion he was a bulk salesman in the mill starch division.

Ronald R. Boyd has been elevated to the post of executive vice-president of Amerotron Corp., in which he will head up all administrative functions of the company in New York City. Mr. Boyd joined Textron Inc., Amerotron's parent company,



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in 1942, and was elected a vice-president of Amerotron in June 1955. . . . Charles Earle Sr. has been named a vice-president and is sales manager of Department 4, woolen fabrics for the company's Barnwell (S. C.) Plant. Mr. Earle has been with the company since 1954. . . . Raymond J. Austin has been named treasurer of the corporation. He joined Robbins Mills Inc. in 1953 as controller. Prior to that he was with Burlington Mills for 18 years. . . . Joseph Sandlin has been named controller of Amerotron. Mr. Sandlin, who is located at Aberdeen, N. C., joined Robbins Mills Inc. in 1953.

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You can count on Clinton starches to do a consistently good sizing job on every warp thread . . . to make your weaving easier, better.

Clinton starches give you the dependable quality that makes yarns weave at high efficiencies . . . turn out first rate textiles that'll pass the most discriminating inspector's final check. In fact, many mills use Clinton starches as a standard of comparison. They increase warp strength to easily withstand abrasion . . . reduce friction . . . smooth fuzzy fibres. Clinton starches give your fabrics proper crispness and body when used in the finishing process too.

Choose Clinton starches. You can depend on them . . . warp after warp after warp.



William B. Seabrook

has joined Seabrook Transmission Co., Anderson, S. C., designer and distributor of textile machinery parts and improvements. As a project engineer, Mr. Seabrook will handle sales for the firm in part of Georgia and Alabama. He is a graduate of Clemson College, and recently completed advanced mechanical engineering work at the University of Illinois.

William P. Russell has been named factory agent in Georgia, Alabama, Mississippi and Tennessee for the Charles Bond Co., manufacturer of textile leathers. Mr. Russell will make his headquarters in Atlanta. William J. Moore continues as factory agent for the company in North and South Carolina.

Joseph V. Brice has been named superintendent of the Renfrew Bleachery of Abney Mills, Travelers Rest, S. C. Mr. Brice, who

- technical service in connection
- with your specific problems
- is available without obligation.



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CLINTON, IOWA**

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COMPANY
P. O. BOX 8
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PERSONAL NEWS

succeeds Benjamin N. Anderson who retired July 1, was formerly assistant superintendent. Prior to joining Renfrew two years ago, he was with Utica-Mohawk. . . . John O. Vernon Jr., foreman of the Renfrew dyeing department, has been named assistant superintendent of the plant to succeed Mr. Brice. William L. Hayes succeeds Mr. Vernon as foreman of the dyeing department.

Arthur B. Edge III has been named plant engineer of the Valway Plant, Hillcrest Division, Callaway Mills Co., LaGrange, Ga. Mr. Edge is a graduate of Georgia Tech.

David T. Barry has been named director of marketing for Stowe-Woodward Inc., manufacturer of rubber-covered rolls in the textile industry. In his new post, Mr. Barry will co-ordinate sales and marketing activities of the company's three plants in Griffin, Ga., Newton, Mass., and Neenah, Wisc.



Henry L. Dozier

Henry L. Dozier has been named technical sales representative for Georgia and Alabama for the Emkay Chemical Co., Elizabeth, N. J. Mr. Dozier, who attended Clemson College, has had broad experience as a dyer and as superintendent of dyeing at Avondale Mills, Spencer Mills, Adelaide Mills and Katherine Rug Mills. He will make his headquarters in Dalton, Ga.

Gaston Gage, professor of textiles and head of the yarn manufacturing department at Clemson College, has been named acting dean of the School of Textiles. He succeeds Dr. Hugh Brown. A native of Chester, S. C., Dean Gage has been a member of the school's faculty 25 years. He was named associate professor in 1943. He graduated from Clemson in 1921 and later studied at the University of North Carolina and Pennsylvania State College.

Virgil Hall, superintendent of the Karastan Rug Mill of Fieldcrest Mills Inc., Leaksville, N. C., has been promoted to the newly-created position as assistant to F. W. Klein, assistant manager of the plant. Succeeding Mr. Hall as superintendent is John G. Cunningham, former assistant under Mr. Hall.

William Trethaway has been named Southeastern sales manager for Fischer & Porter Co., manufacturer of process instrumentation systems. In his new post Mr. Trethaway will supervise sales activities for the firm's Atlanta, Birmingham and Knoxville offices as well as offices in Clearwater and Jacksonville, Fla. He has been with the company since 1951.

Howard Randolph Stone has been named superintendent of Cone Mills Corp.'s Edna Plant at Reidsville, N. C., to succeed Clarence L. Jolly who retired June 30 on

account of ill health. Mr. Stone, a native of Spartanburg, S. C., has been assistant superintendent of the plant since 1942. Prior to joining Cone, he was with Spartan Mills, Spartanburg. Mr. Jolly, a native of Kingston, Ga., had been superintendent of the Edna Plant since 1942. Prior to that he was manager of Jackson Mills and personnel manager of Dan River Mills. . . . Howard Shell has been named assistant superintendent of the plant to succeed Mr. Stone. Mr. Shell has been with the company since 1952. He is a graduate of the North Carolina State College School of Textiles.

After the death of his father, Mr. Murphy was a member of a distinguished Georgia textile family. His father established a number of the textile mills in the Chattahoochee Valley section of Georgia and Alabama. His brother, N. Barnard Murphy, was an official of Riegel Textile Corp. at Trion, Ga., prior to his death last May. Mr. Murphy was at one time superintendent of Columbus (Ga.) Mfg. Co., and he was associated with the H & B American Machinery Corp. in Atlanta prior to joining Mary Leila in 1946. He was a former director of the Cotton Manufacturers Association of Georgia. Survivors include his widow, a son and five daughters.

William J. Thackston Jr., 47, head of the textile chemical sales department of Rohm & Haas Co., Philadelphia, Pa., died June 15 at his home in Myrtle Beach, S. C. Mr. Thackston joined Rohm & Haas as a chemist in 1936; was named a chairman in the textile chemical department in 1937; and was named head of textile sales service in 1941. He is survived by his widow and two daughters.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

GREENVILLE, S. C.—The J. P. Stevens & Co.'s Piedmont (S. C.) plant and Apalache plant at Greer, S. C., have cut back to a four-day week following the vacation shutdown. The move has been made due to inactive market conditions, according to notices posted in the plant.

PAGELAND, S. C.—The Palmetto Yarn Mills Inc. has announced plans for the expansion of its present installation in this city. The expansion calls for the addition of some 8,000 square feet of floor area to the plant. Part of the Neisler Mills Division of the Massachusetts Mohair Plush Co., the plant presently employs approximately 88 persons. At the completion of the expansion, the plant's productive capacity will be 25 per cent greater and 20 more persons will be employed.

CLINTON, S. C.—Clinton Cotton Mills has announced that it is installing 100 new Draper X-2 model looms. The looms will weave 50-inch print cloth and are expected to be in operation by September according to the announcement.

HENDERSONVILLE, N. C.—The Blue Ridge Cord Co. of this city has been sold to Puritan Cordage Mills Inc., Louisville, Ky. The newly-acquired company was established in Greensboro, N. C., in 1927. It was moved to Hendersonville in 1935. It was moved to Hendersonville in 1935. The plant employs some 25 persons.

CHESTER, S. C.—A further expansion of the Eureka Plant of The Springs Cotton Mills has been announced. When this expansion is completed the size of the weave room will be more than doubled. The plant is presently operating 76,000 spindles and 1,071 looms. Mill officials would give no estimate of the total number of looms or other equipment planned for the new section. The addition at Eureka is part

of an organization-wide expansion program by the company. Additions to the company's Lancaster, S. C., plant, now nearing completion, will cost more than \$4,000,000. More than \$1,000,000 has been spent in recent additions to the company's Kershaw, S. C., plant and expansion work already completed at the company's Fort Mill, S. C., plant has cost in excess of \$2,000,000.

ALBANY, GA.—Coats & Clark Inc. has announced plans to establish a weaving, dyeing and finishing operation at its plant here. Company spokesmen said that the machinery was being prepared for shipment and that this will be a long-range program providing for general expansion of the new operation as workers become trained in weaving techniques and allied processes. First production of the weaving department will be tape for the company's zippers.

LYNCHBURG, VA.—The Lynchburg division of Bates Mfg. Co. is slated for closing in July after finishing current stocks in process. The plant currently employs approximately 550 persons. The stagnant condition of the cotton textile industry was blamed for a series of cutbacks, including the dropping of a shift employing some 300 persons, since Bates bought the mill late last year.

COLERIDGE, N. C.—Enterprise Mfg. Co., of this city, has been purchased by C. & H. Enterprises, Atlanta, Ga. The plant, which is a former unit of Boaz (Ala.) Mills, has been put back on the market by the new owners. The mill contains some 6,000 spindles and was engaged in the production of carded yarns. The plant consists of 45,000 square feet of floor area.

LA GRANGE, GA.—The Callaway Mills Co., of this city, has announced the acquisition of controlling interest in Leeming Bros., Salford, England. The newly-acquired company is in the industrial wiping towel business.

STARKVILLE, MISS.—Starkville Mills Inc., a subsidiary of Phillips Associates Inc., Siluria, Ala., has purchased and plans to reopen the cotton mill in this city. New equipment needed is estimated to cost some \$750,000. The plant will employ about 350 persons when in operation.

GREENVILLE, S. C.—The Piedmont, Greer, Victor and Whitmore Plants of the J. P. Stevens & Co. Inc. have been awarded certificates from the South Carolina Department of Labor for outstanding safety records during the year 1956. The com-

pany's Appleton Plant located at Anderson, S. C., is to receive a similar award in August.

PENSACOLA, FLA.—The world's safety record for textile plants was broken early in July at the Chemstrand Corp.'s nylon plant here. The first lost-time injury occurred after over 17 million accident-free man-hours. Last March the plant's more than 5,000 employees had celebrated a new world's textile plant safety record of more than 13,624,000 man-hours without a lost-time accident.

ATLANTA, GA.—The Fulton Bag & Cotton Mills has announced that several Warner-Swasey weaving machines, Rieter triple coiler heads, and Pfenningsberg sample spinning frames have been donated to the textile schools at Georgia Tech, N. C. State, Clemson, Auburn and the Institute of Textile Technology. These machines were used previously for experimental and research purposes and have become available as a result of the over-all program of reorganization and streamlining operations by the company.

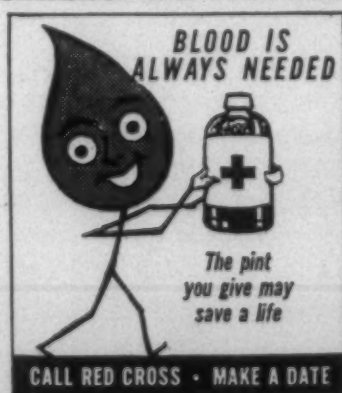
WHITESBURG, GA.—The physical assets of Virginia Mfg. Co. Inc. of this city, have been purchased by the West Georgia Mills Inc., Carrollton, Ga. The newly-acquired plant has been engaged in the manufacture of braided cordage, cotton yarns and packaged braided specialties for about ten years.

TRION, GA.—Riegel Textile Corp. has recently installed a new James Hunter Machine Co. Tenter-Dyer in its cotton fabrics plant here.

ANDERSON, S. C.—Five plants of Abney Mills in South Carolina have been designated to receive safety award certificates for their outstanding safety records during the year 1956 by the South Carolina Department of Labor. The Renfrew Bleachery, Travelers Rest; Anderson Mill, Ladlassie Mill, Riverside Mill, all of Anderson; and Grendel Mill, Greenwood; are the plants cited by the Labor Department.

CHARLOTTE, N. C.—The Amerotron Corp. expects to close down its Louise Plant in this city around mid-August. The combed lawn plant began its closing out late last month. Company officials pointed to the adverse conditions of the market as the reason for the mill closure.

BURNSVILLE, N. C.—The Firth Carpet Co. of this city, is currently installing four Whitin 84-inch wide cards, eight Model E wool spinning frames and eight Model K twistors.



Want to Cast a "Vote" for Modern Equipment?

Textile Bulletin's Prize Contest Gives you this opportunity! SEE PAGE 45.

Rogers Hits At Industry's Shortcomings

In speaking before the Woodruff, S. C., Rotary Club last month, Frank C. Rogers, vice-president, Reeves Brothers, spoke out against the shortcomings which are presently plaguing the textile industry. He said that the industry has been going through a period of semi-depression for the past two years in spite of the fact that most other industries are flourishing and hitting new highs in sales and earnings.

The Japanese import situation was the first point spoken about by Mr. Rogers. He said that, "even though the yardage of cloth coming into this country is limited by the Japanese volunteer control, if we do not have a high enough duty on cloth, it plays havoc with the industry." In citing an example, Mr. Rogers said in a 50 million yard per year market if "the Japanese bring in only one million yards—with their 90 per cent lower labor, cheaper cotton and low duty, they put a price of ten per cent lower than our cost. The sale at this level immediately sets the market for the cloth and as a result the mill that may have inventory on this particular cloth has to lower its price so it can continue to sell and turn over its money. Gingham is one fabric that is in this category at present."

Mr. Rogers cited lack of control as another shortcoming in the textile industry. In comparing textiles to autos and steel, he said "automobiles are controlled by three companies and steel by five. The textile industry has about 600 independently owned companies with very little control." He added that, "the largest company owns less than five per cent of the industry. As a result, lowest prices, which set the market, are made by the company that most urgently needs the cash, or the company that has the largest inventory."

The next shortcoming faced by the industry was said by Mr. Rogers to be the "fact that people are not buying enough textiles even though they are buying more than ever." He said that promotional type advertising in an effort to get a greater portion of the customer dollar is being undertaken by various segments of the clothing trades in co-operation with the mills at present. "What they are trying to do is very simple," he said, they are trying to "make the American male more conscious of his wearing apparel. If they achieve this, it can greatly increase sales of soft goods in the men's and boys' field. Obviously, any increase in sales of textile products would quickly reflect increased sales at mill level." He said that similar campaigns could be conducted for fabrics which go into household usage such as rugs, draperies, etc.

The final point made by Mr. Rogers was that "over-production is the biggest sin of our industry. The temptation is ever present," he said, "when we are running six days on a nice streamlined schedule, and sales fall off, to continue on this schedule and put goods into stock with the expectation that the market will improve shortly and our inventories will be depleted." He said that the trouble was when several companies did the same thing the result is that two or more of them need cash before the market improves and the price asked for the fabric goes down. "In other words," he said, "we are inclined to cut prices instead of curtailing. We want to use curtailment as a last resort since it means less income for our employees and sometimes lay-offs, which is the last thing we want to do to our loyal employees."

Mr. Rogers summed up his ideas saying that it would appear that "the industry is getting into a much better balance of supply and demand." He added that he was firm in the belief that "the near future promises the textile industry a period of relative prosperity."

Scholarships Awarded At Clemson

Henry H. Perkins, Elloree, S. C., and William J. Allred, Belton, S. C., have been awarded \$1,000 Blackman-Uhler scholarships in textile chemistry for 1957-58 at Clemson College. Mr. Perkins, winner of the freshman chemistry achievement award at Clemson, has a 3.4 grade point ratio, of a possible 4.0. Mr. Allred, a veteran of naval service in China, Korea and Okinawa, was an honor student as a freshman. The scholarships are awarded to juniors in textile chemistry for use in the last two years of undergraduate work. Selection is based on need, ability and evidence of good character.

Profits, Output Sag As Worker Earnings Rise

Profits after taxes in the first quarter of this year sagged in the textile mill products industry according to a report issued jointly by the Federal Trade Commission and the Securities and Exchange Commission. Textile mill products manufacturers showed a profit after taxes of \$66 million on net sales of \$3,260,000,000 compared with a net profit of \$93 million on sales of \$3,334,000,000 in the first quarter of 1956. A net profit of \$96 million was noted on sales of \$3,484,000,000 during the fourth quarter of 1956. The annual rate of profit on stockholders' equity for the first quarter in the textile mill products industry was 4.4 per cent after taxes as against 6.4 per cent in the first quarter of 1956.

The output of cotton broadwoven fabrics in the first quarter this year fell nine per cent below the 1956 first quarter production and one per cent below the 1956 fourth quarter production, according to the Census Bureau. Production totals for the respective periods are: 2,506,224,000; 2,755,468,000; and 2,538,047,000 linear yards. The first quarter of 1957 saw declines of 25 per cent in the colored yarn fabrics field while print cloth and napped fabrics each declined seven per cent.

A longer work week pushed up average weekly earnings of production workers in the textile mills between May and June, according to a report from the Bureau of Labor Statistics. These workers averaged \$58.50 weekly for 39 hours in June as compared with \$57.60 weekly for 38.4 hours in May. Their average hourly earnings were \$1.50 in both periods. Employment of production workers in the textile industry fell to 910,900 in June 1957 from 965,800 in June 1956 and 912,500 in May 1957.

Role Of Textile Engineer Studied

The role of the textile engineer in industry as well as the need for such a separate and distinct classification of engineering was the subject of considerable debate at the textile committee panel held at Cornell University in connection with the 65th annual meeting of the American Society for Engineering Education. Dr. Martin J. Lydon, president of Lowell Technological Institute, presided as moderator of the panel as well as the open discussion from the floor that followed.

Participants emphasized the increasing necessity for a heavier concentration on the basic scientific and engineering subjects in textile engineering curricula. This, it was agreed, will have to be at the expense of some of the applied textile subjects. Major reasons given for this revision were the tremendous technological developments in the last few years in machines, processes and controls and the certainty that the pace of such changes would accelerate rapidly in the future. It was felt that the teaching of present techniques, many of which would be obsolete within a few years, must give way to the intensive study of fundamentals and the development of an analytical, research-minded engineer capable of coping with the, as yet, unknown problems of the future.

Many speakers stressed the necessity of some training in marketing, management and costing for the textile engineer. Rapidly changing consumer wants must be translated into design and production almost overnight in a highly competitive, price sensitive field. The textile engineer must have a broad background and be flexible and alert enough to adjust quickly to changes as in almost no other industry. The need for the separate classification of textile engineer was also debated. It was agreed that the textile industry was in many respects unique. Its raw materials, fibers, are unlike any other engineering materials such as liquids or relatively large-scale solids. The great number of processes through which they pass and the almost infinite combinations of those processes to produce a limitless number of end products make it necessary for a specialized engineer, trained in this field, to be of maximum value to industry.

The panel members consisted of: A. G. Ashcroft, Arthur

D. Little Co.; H. F. Schiefer, National Bureau of Standards; Stanley Backer, M.I.T.; Charles F. Edlund, Lowell Technological Institute; Jules Labarthe Jr., Mellon Institute of Industrial Research.

Textile Packaging Committee Formed

James T. Covington, Fieldcrest Mills, Spray, N. C., has been elected chairman of the textile packaging committee of the Packaging Institute Inc. at its organizational meeting held June 13 in Charlotte, N. C. Thomas R. Williams, Riegel Textile Corp., Ware Shoals, S. C., has been elected vice-chairman and Walter L. Mason Jr., Burlington Industries, New York City, has been chosen as the committee's secretary.

The committee plans to work in two fields, at present, with J. L. Cobb, Utica-Mohawk Division of J. P. Stevens & Co., Clemson College, S. C., serving as chairman of the subcommittee on interior (or consumer) packaging and O. L. Yorks, Erwin Mills, Durham, N. C., acting as chairman of the subcommittee on exterior (or shipping) packaging. The newly formed committee will also work towards standardization of textile packaging terminology as well as towards the establishment of standards in the purchasing of packaging materials.

S.E. A.A.T.C.C. Holds Outing

James M. Stephenson, J. P. Stevens & Co. Inc., Milledgeville, Ga., became the golf champion of the Southeastern Section, American Association of Textile Chemists & Colorists at the group's eighth annual outing held last month at

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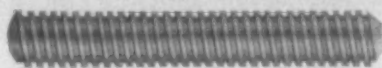
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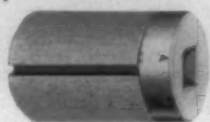
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Radium Springs, Ga. Mr. Stephenson's 82 gross score over the soggy Radium Springs course won top honors for manufacturers and the F. H. Ross cup. Russell Gill, Southern Sizing Co., Atlanta, led with an 82 low gross in the suppliers' division. Dwight Turner of Arnold, Hoffman & Co., Atlanta, was runner-up with an 84.

More than 300 members of the Southeastern Section and their wives attended the meeting which attracted members from other sections as well. George Caron, A. & M. Karagheusian Co., Albany, Ga., was general chairman of the outing. He was assisted by Jim Hall, F. H. Ross Co., Atlanta, general co-chairman. William B. Griffin, Dexter Chemical Corp., Atlanta, is chairman of the section.

A horseshoe pitching tournament and a bait casting contest were held in addition to the golf tourney. Bridge and canasta games were arranged for the ladies. Prizes were distributed by Elwood Barbre, Pepperell Mfg. Co., Opelika, Ala., chairman of the entertainment committee.

Avondale Tells Of Improvements

Avondale Mills of Alabama has made considerable progress toward the modernization of its mills, according to announcements at the company's annual sales meeting held early in June at the Sedgefield Inn near Greensboro, N. C. The Eva Jane Plant at Sylacauga, Ala., has experienced a complete modernization program which begins with the cotton opening machinery and extends through the finishing department. The company believes this plant to be one of the best equipped coarse colored goods units in the industry. All weights of denims and tickings are produced at this installation.

The company's Birmingham plant produces woven plaids, checks, cords, chambrays and dobby fabrics for fine combed yarns. The spinning room has been completely rearranged and in addition suction cleaning and open creels have been installed on the frames. The expenditure of over one million dollars for modernization of the carding department and additional spinning equipment is planned for next year.

Sizeable expenditures have been made at the indigo denim mill in Pell City, Ala. Additional cards and roving frames have been added to balance plant production. The finishing equipment was supplemented and modernized two years ago.

The Catherine Plant at Sylacauga has had its spinning department modernized with the addition of open creels, suction cleaning and frame cleaners. This mill operates some 250 looms. All of the looms are 16 harness dobbies suitable for many types of fancy greige fabrics. A new building has been erected and equipped with the latest type machinery to improve cleaning and opening.

The Alexander City, Ala., plant is currently operating on tickings. During the past two years wide looms have replaced most narrow looms. Ten new 90-inch looms are operating on an experimental basis. Many improvements have been made including a new opening room which is equipped with the latest machinery. This opening room has been in operation about four months. The spinning department in this plant has been modernized with the addition of open creels, suction cleaning and frame cleaners.

The Pilot Plant, which is a service organization installed in Sylacauga some years ago for the benefit of all the company's plants, has produced a total of 963 sample patterns

in the first five months of 1957. Of the total, 215 were ticking samples, 224 were sportswear patterns and 524 were styled fabric patterns. In making samples the same yarns, dyestuffs, technical data and finishing procedures are used as are used by the mill. This enables the samples to match production cloth in construction, color, hand and drape.

Fabric development is reported by Avondale to be a must for any company which manufactures styled goods. New fabrics can attract new customers and strengthen the company's position with established customers. Some of the factors considered by this department are types of yarns, fibers or blends of fibers, dyestuffs, weaves, cloth construction, finish and mill equipment.

Avondale has physical testing facilities for yarns and fabrics both in the individual mills and in the main laboratory at Sylacauga. The mills and the laboratory make various tests beginning with the raw stock and continuing through the finished goods. On cotton, tests are run to determine the fiber diameter, fiber length, tensile strength, moisture content and non-lint content. The determinations are used as guides in the purchase of raw stock best suited for the company's needs but are in no way replacements for the classing of cotton as to staple length and grade by the cotton classing department. The principal tests and checks made on the finished fabric include width, weight, count, break, size content, moisture content, shrinkage, abrasion, tear strength and wrinkle recovery.

Piedmont A.A.T.C.C. Holds Summer Outing

Gordon Eaves, Cloverdale Dye Works, High Point, N. C., won low gross honors, shooting a sizzling 68, in the golf tournament of the annual Summer outing of the Piedmont Section, American Association of Textile Chemists & Colorists held June 9, at Blowing Rock, N. C. D. B. Groves, Arkansas Co., Greensboro, N. C., won low net with 129-61-68.

This year's outing drew a record attendance of 461 members and guests. More than 160 entered the golf tournament. The low gross winner among the suppliers was Gordon Wood, Corn Products Co., who finished with a 69. Low net among the suppliers was won by Sandy Young, Joseph Bancroft & Sons, with a 72-3-69. Special prizes were awarded to Paul McGinty, Laurel Soap Co., longest drive; C. O. Stevenson, Ciba Co., closest to the pin on the No. 7 hole; and Charles Sledge, General Dyestuffs Co., for having the most fours.

South Leads In Wool Spindle Increases

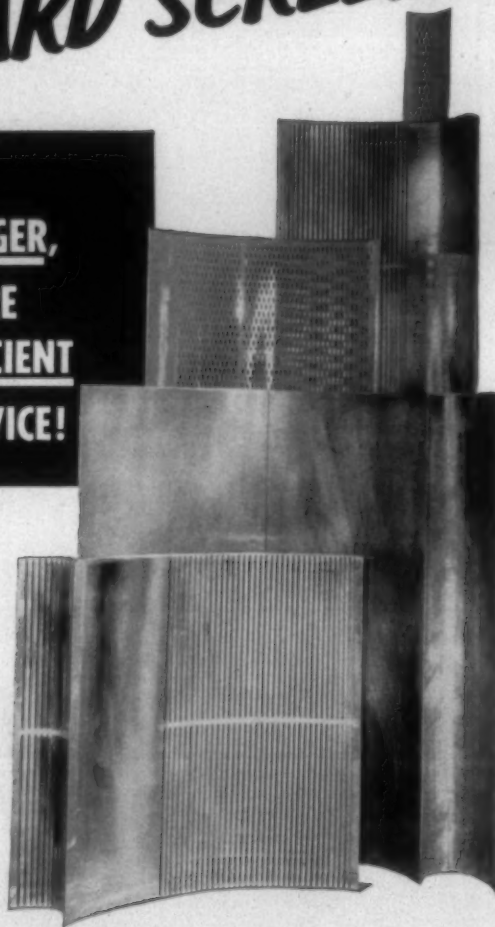
The South is far out in front of all other regions in the U. S. in rate of increase in operation of woolen and worsted machinery. The Atlanta field office of the U. S. Department of Commerce reports that since 1939 Georgia, Tennessee, the Carolinas, Virginia, Maryland, Delaware, Texas and Mississippi have increased the number of woolen and worsted spindles in place by 119 per cent. Other sections of the country have shown substantial decreases during this 17-year period.

The increase in the ten-state Southern area has been from 194,472 spindles in 1939 to 425,670 last year. Total spindles in the U. S. decreased during this period from 3,952,297 to 1,559,459. This is a decrease of approximately 60 per cent. Georgia had more woolen spindles in place last

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year than any other state in the South and was the nation's seventh most important state from that standpoint. North Carolina led the South in worsted spindles and was second in the U. S.

Joint Research Conference Plans Told

John Boulton, director of Droylsden Laboratories, Court-auds Ltd., Manchester, England, and president-elect of the Society of Dyers & Colourists will be the guest speaker of the joint conference of The Fiber Society and the Textile Institute of Manchester to be held at the Hotel Statler, Boston, Mass., Sept. 4-6. Among other participants from Great Britain will be Geoffrey Loasby, director and technical manager of British Nylon Spinners Ltd., and chairman of the council of the Textile Institute; Allan Draper, vice-president of the Textile Institute, and director of Messrs. William Birtwistle Allied Mills Ltd., Preston, Lancashire; and Charles H. Crabtree, member of the Council of the Textile Institute and managing director of Charles Crabtree Ltd., Todmorden, Lancashire. These three representatives will each serve as chairman at one of the six technical sessions which will hear 12 papers.

The remaining three sessions will be directed by: Charles R. Stock, American Cyanamid Co., Stamford, Conn.; Joseph L. Barach, Celanese Corp. of America, Charlotte, N. C.; and Dr. Howard J. White, director of the Textile Research Institute, Princeton, N. J. Mr. Stock is the chairman of this year's program committee. Dr. Burt Johnson, president of The Fiber Society, will preside over the conference and will address the opening meeting. Local arrangements are being made by Dr. Walter J. Hamburger, Fabric Research Laboratories, Dedham, Mass., who has been acting as direct liaison between the two scientific organizations.

Fabric Display Honors Textile Veteran

A world-wide collection of modern textiles at North Carolina State College, Raleigh, has been established in honor of William H. Harriss at an 80th birthday celebration for the textile veteran. The affair was given by the Sanforized Division of Cluett, Peabody & Co., with which Mr. Harriss has been associated for 22 years. The fabric collection will be brought up to date twice a year by the company. Mr. Harriss received a Bachelor of Arts degree from the college in 1895, at the age of 17, and later an M. E. degree. He was the youngest student ever graduated there and is believed to be the oldest living alumnus.

Speakers Named For Fall Yarn Assn. Meet

Dr. M. K. Horne, chief of the economics division of the National Cotton Council, Memphis, Tenn., and Dr. J. A. Jones, president of Union Theological Seminary, Richmond, Va., will address the convention of the Carded Yarn Association at The Cloister, Sea Island, Ga., Sept. 11-13. Dr. Horne and Dr. Jones will speak at the open meeting for members, associate members and guests Friday morning, Sept. 13, at which J. A. Conner, Hyde Park Mills, Covington, Tenn., first vice-president of the association, will preside.

The plan for re-zoning the organization will go into effect at the meeting with the result that only four new directors will be named to replace seven whose terms expire. The new plan provides for 14 directors serving two-year

terms, one-half of these expiring each year. The reorganization will place Alabama, Tennessee, Pennsylvania and New York in Zone 1; Georgia and South Carolina in Zone 2; and North Carolina, Virginia and Kentucky in Zone 3.

M. Y. Cooper, Harriet & Henderson Cotton Mills, Henderson, N. C., president of the association and chairman of Group 1, will preside at the meeting of that group which consists of producers of all knitting yarns. V. C. McQuiddy, U. S. Rubber Co., New York City, the chairman of Group 3, will preside at the meeting of that group which consists of producers of white weaving yarns, singles and plied, 12s and coarser, and all yarns made from tinged cotton and waste. H. W. Little, Little Cotton Mfg. Co., Wadesboro, N. C., chairman of Group 4, will preside at the meeting of producers of white weaving yarns, singles and plied 13s and finer.

Long Staple Sale Bill Becomes Law

President Eisenhower signed into law, on July 10, legislation authorizing the Commodity Credit Corp. to sell 50,000 bales of extra long staple cotton now in federal stockpiles to textile mills and others. The sale would be made at domestic prices.

In signing the controversial measure, Mr. Eisenhower said he was guided by two factors: (1) He is convinced there will be no adverse reaction on nations which traditionally have supplied the extra long staple fiber to the U. S.; and (2) the sale represents no precedent for future disposal of stockpiled materials. The chief executive emphasized that the U. S. "has no intentions of using stockpile inventories to influence world market conditions."

The President pointed out in his message that long staple cotton was no longer listed as a strategic and critical material and that a liquidation plan was under study. He acknowledged that "the disposal authorized is not in accord with the procedures established by Congress for the disposal of stockpile items. Domestic long staple cotton is needed in the American market now," Mr. Eisenhower said, and concluded, "approval of this legislation makes it possible to meet this need in the interim period before the new crop becomes available in the late Fall."

Textile Scholarships Awarded

The Georgia Textile Education Foundation Inc. has announced the names of seven Georgia students who will receive scholarships in textile engineering at Georgia Tech beginning this Fall. The foundation normally awards five scholarships annually. The two additional grants this year were made possible by funds from unused portions of scholarships awarded in prior years. The scholarship award program began in 1952.

The winners of the four-year scholarships, which have a maximum value of \$2,400 each, are: Bobby B. Bridges, Crawford; Andrew R. Johnson, Rockledge; and James D. Middlebrooks Jr., Haddock. Georgia Tech students who will be aided in completing their textile educations are: Lawrence L. Lynch Jr., Thomaston; Huey E. McCoy, Macon; James G. Nance, Griffin; and Leonard D. Jones, Yatesville.

The foundation scholarships are awarded to students who possess qualities indicating potential value to the Georgia textile industry in executive capacities. Financial need of the individual applicant is a lesser, though important, consid-



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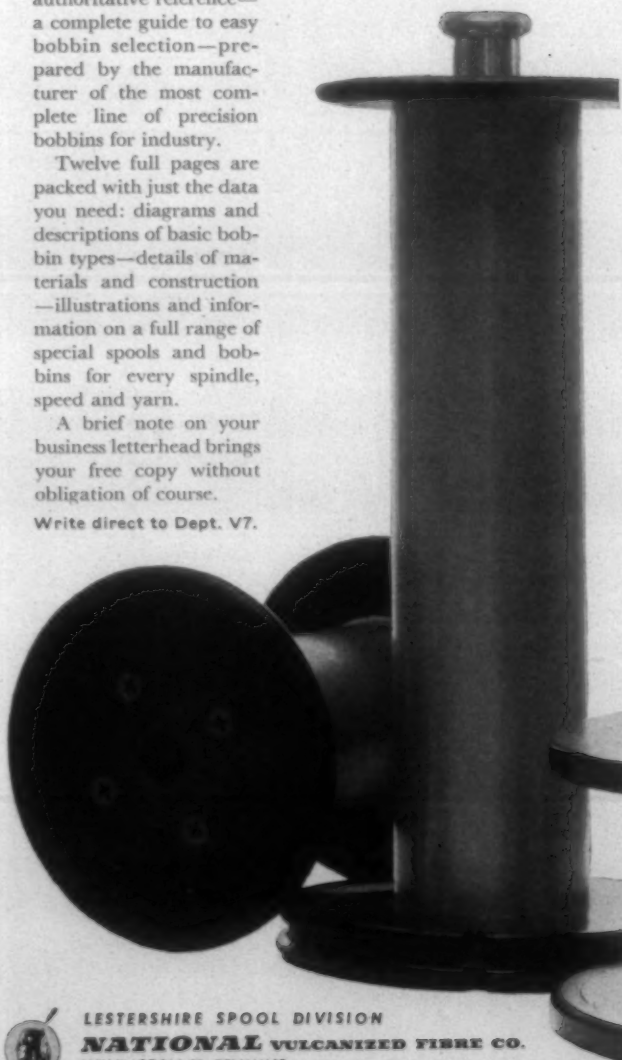
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eration. Recipients of the scholarships are selected by the Georgia Tech Committee on Students Grants-in-Aid and Scholarships.

Test Methods Committee Formed

A new policy committee of the executive committee on research of the American Association of Textile Chemists & Colorists—the International Test Methods Committee—was established at the association's council meeting in New York City in June. The new committee has been organized because of the increasing importance of the U. S. in foreign markets and as a means of bringing more international test information to the American industry. Leonard S. Little, consultant and former E.C.R. chairman, is chairman of the new test methods committee. Other members of the committee are Charles W. Dorn, consultant and present chairman of the E.C.R.; William D. Appel, National Bureau of Standards; J. Robert Bonnar, General Dyestuff Co.; Charles A. Sylvester, E. I. du Pont de Nemours & Co.; George P. Paine, executive secretary of the A.A.T.C.C. (member in ex-officio capacity); and Dr. Harold W. Stiegler, who is the committee's secretary.

Expansion Of Wool Research Urged

Intensified wool research efforts will immeasurably help wool to improve its position against competition, Dr. Gerald Laxer, director of science and technology for the Wool Bureau, declared in a recent talk before the National Association of Wool Manufacturers' seminar at the Philadelphia (Pa.) Textile Institute. Dr. Laxer called for increased co-operation in support of wool research on the part of the wool manufacturing industry. "If management more effectively employs the results of past wool research and greatly expands its support and encouragement of present and planned wool research activities, it will properly augment and, therefore, accelerate other efforts to strengthen the industry," he said.

Pointing out that most developments of new wool processing techniques have taken place in non-industrial laboratories, Dr. Laxer lamented the absence of industry efforts to "bring these laboratory curiosities into commercial reality for the common good." Calling for an increase in co-operatively-supported research projects, Dr. Laxer outlined a technical research program which would benefit all segments of the industry. The program includes research to minimize processing damage, the search for new and improved properties, studies of the relationship of wool fiber properties to fabric performance, and fundamental research aimed at discovering new processing concepts and techniques for producing higher quality wool textiles.

Management support of wool utilization research is the best guarantee of a healthy future for the industry, Dr. Laxer said. "Co-operatively-supported research efforts which elevate the efficiency of all individual units in an industry need never destroy the single individual's competitive position," he pointed out. "There will always be room for a specific mill's initiative and foresight to enhance its competitive stature."

Owens-Corning Scholarships Awarded

Two \$1,200 Owens-Corning Fiberglas scholarships for 1957-58 have been awarded at Clemson College to excep-

tional students in engineering and textiles. Recipients are Henry F. Cooper, North Augusta, S. C., mechanical engineering senior, and Ervin R. Poole, Travelers Rest, S. C., textile chemistry junior. The awards are based on high scholastic achievement and character.

Mr. Cooper ranks in the top third of his class with a 3.5 cumulative grade point ratio of a possible 4.0. Mr. Poole is a transfer student from Furman University with a 3.3 cumulative grade point ratio. He attended Furman one year on a general excellence scholarship and entered Clemson's School of Textiles following army service.

O.T.C. Entry Bill Shelved

The House Ways and Means Committee has indefinitely postponed action on the bill (H. R. 6630) to authorize U. S. membership in the Organization for Trade Co-Operation. O.T.C. is a 35-nation organization to administer the General Agreement on Tariffs and Trade. President Eisenhower told Republican Congressmen at a recent White House breakfast that the failure of Congress to enact this bill was "ridiculous." In the 84th Congress an identical bill (H. R. 5550) was reported by the committee but was never called up for House consideration.

Opposition to the Administration's trade policies erupted on the House floor when Rep. Cleveland Bailey (D., W. Va.) made public a Budget Bureau letter from Percival Brundage, director, to the House committee which opposed a general quota bill (H. R. 2776). Mr. Brundage's objections were that almost any increase in imports would "create a presumption of injury to the domestic industry," and would require the Tariff Commission to impose a tariff or absolute quota. He said that his bureau was convinced that "a substantial increase in imports generally reflects, rather than undermines, the growth in this country and that cases of injury due to increased imports are relatively rare and are covered by existing legislations and procedures.

Textiles Rated Poorest Risk

Secretary of Treasury George M. Humphrey has labeled the textile industry the poorest risk for young men trying to start new businesses. During recent Senate Finance Committee hearings, Sen. George Smathers (D., Fla.) wondered whether there was as much opportunity today as years ago for young men to start new businesses. Mr. Humphrey replied that "except for textiles, young men have far greater chances to start new businesses than they did 20 to 30 years ago."

A.C.M.I. To Broaden Statistical Data

Plans to implement the statistical and market research program recommended at the annual convention of the American Cotton Manufacturers Institute were dealt with at a meeting in mid-July of the association's economic policy committee in New York City. Among the subjects covered were additional statistical information in the quarterly bulletins, a new series of bulletins on textile economics and statistics, and a series of special surveys of the economic scene. The committee also developed plans to consolidate the statistics of the A.C.M.I. and the National Federation of Textiles.

F. E. Grier, president and treasurer of Abney Mills, Greenwood, S. C., was chairman of the meeting. Others

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Buck Creek Buys Sanders Mill

The J. W. Sanders Cotton Mill, Starkville, Miss., formerly owned by the estate of R. D. Sanders, Jackson, Miss., has been acquired by the Buck Creek Cotton Mills, Siluria, Ala. The new owners purchased all of the outstanding stock in the Sanders mill and plan to resume operations as soon as possible. The mill had been engaged in the manufacture of plain and fancy chambray.

At the first meeting of the new board of directors, J. T. Phillips, chairman of the board of Buck Creek, was elected chairman; Fred F. Phillips, Siluria, was elected president; and H. M. Johnson, Siluria, was elected executive vice-president. Julius E. Chapman, Birmingham, Ala., was elected to the post of secretary and treasurer. J. Lamar Moore was named vice-president and will act as manager of the mill. Fred F. Phillips is also president and treasurer of Buck Creek Cotton Mills. H. M. Johnson is vice-president in charge of sales of Phillips Associates Inc., selling agent for Buck Creek Cotton Mills.

The name of the corporation was formally changed to Starkville Mills Inc. although no other change in the corporate charter or by-laws were affected. Substantial rehabilitation work has been started and upon completion of the installation of long draft spinning on the warp frames, the mill will begin the manufacture of styled carded plain and fancy chambray materials. The goods will be directed to the converter trades as well as the "over the counter" fields.

When in operation by the Sanders Co., the mill was equipped with 21,364 spindles and 470 Draper Model E looms, all of which were belt driven. The mill was also equipped with a dye plant and had equipment for finishing chambrays. The purchase price was not disclosed.

N. C. State Expands Textile Research

The department of research in the School of Textiles at North Carolina State College, Raleigh, has embarked on an expansion program. Through legislative action, the school is acquiring a larger building than it had requested. Instead of a new building to contain 32,000 square feet, a three-story, 41,000-square-foot structure will be made available. The building will meet present needs, it is reported, and the property on which a new structure would have been erected will remain available for future expansion.

The additional facilities will include offices for the staff, applied research laboratories, warp-preparation laboratory housing warping and sizing equipment and 24 looms,

chemical pilot plant equipment, a number of unit laboratories for chemical research and physical and chemical testing laboratories. The administrative organization is expected to be rearranged and the staff increased.

William A. Newell, co-ordinator of research, reports that "we are very pleased with the way things worked out for expanding our research program." The building, which is located close by the present textile building, will be renovated before it is occupied by the research group.

Experimental 'FA Cotton' Looks Promising

Cotton is proving itself as much a "miracle" fiber as any from the test tube, the U. S. Department of Agriculture reports. Recent research by the department's Southern Utilization Research and Development Division at New Orleans has resulted in a chemical treatment that adds valuable man-made qualities to the inherently good natural qualities of cotton. The new treatment produces "fully acetylated" (FA) cotton. Although still in the laboratory stage, this modified cotton is considered better for some purposes than the partially acetylated (PA) cotton developed by the division several years ago, the U.S.D.A. reports.

Because of its heat and rot resistance, the earlier PA cotton is now produced commercially for ironing board covers and other uses. The new FA cotton is not yet ready for commercial manufacture, but in laboratory experiments it has shown greatly improved heat and rot resistance and the ability to retain most of the natural abrasion resistance and other good qualities of ordinary cotton. In strip breaking strength, FA cotton fabric is superior to both PA and untreated cotton fabrics.

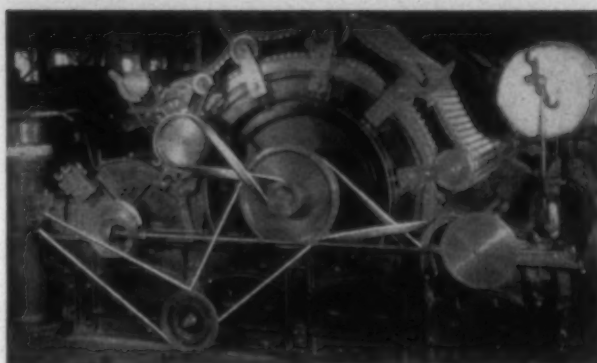
FA cotton looks like untreated cotton. It feels more harsh, but this harshness can be controlled by treating the yarn or fabric with softening agents. It is heavier than untreated cotton but will dry faster. Acetic acid, acetone, aniline and dioxane—solvents that dissolve some synthetic fibers—do not affect FA cotton. Other solvents that dissolve these fibers almost instantly cause FA cotton to swell but not dissolve.

FA cotton requires a relatively short drying time, meeting commercial standards, and it can be dyed a full range of shades and colors. Pleats may be pressed in with a dry household iron at wool setting (200° F.) and will withstand considerable wear and musing. After laundering they may be re-pressed with comparative ease, or may be ironed flat and new pleates set.

Experiments suggest a wide range of uses for FA cotton. Its quick-drying and easy-ironing characteristics should make it a popular clothing fabric. Heating it under tension for a short time produces a very strong fabric with little give that should be useful for making power-transmission belts, conveyor belts and other products requiring a fabric that will maintain constant length. FA cotton's heat and rot resistance should also find commercial application. Its electrical resistance promises to make it a good insulating material, and its good dimensional stability should be valuable in uses where a fabric is exposed to varying conditions of atmospheric moisture.

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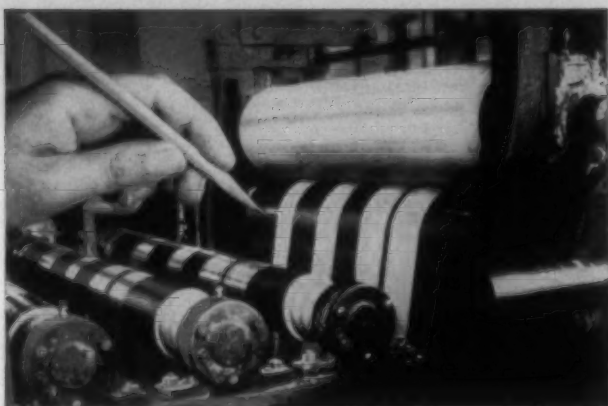
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interviewed in the latest Dun & Bradstreet survey of businessmen's expectations. Manufacturers, wholesalers and retailers were all slightly more optimistic than in the previous survey. Most executives expected price rises to account for part of the increase, rather than expansion in unit volume.

For every manufacturer who thought his company's sales volume in the fourth quarter of 1957 might fall below a year ago, eight manufacturers expected an increase in sales. Manufacturers of nondurable goods, of whom 61 per cent expected increased sales, were more optimistic than businessmen in other lines.

That their net profits in the fourth quarter of 1957 would equal, or exceed the comparable 1956 level was expected by 89 per cent of the executives interviewed. Wholesalers were generally somewhat less optimistic than the others, although 35 per cent anticipated a rise in net profits. The survey indicated that higher profits may be more difficult to obtain than higher sales, but businessmen in all of the industry groups expecting increased profits were far more numerous than those anticipating declines.

High selling prices will most likely be sustained in the fourth quarter of 1957. While two-thirds of the businessmen foresaw no change from last year's level, those anticipating an increase were 11 times more numerous than those who expected to reduce their selling prices. Manufacturers of nondurable goods expected no change in selling prices more frequently than did the other businessmen. Higher prices than last year were predicted most often by wholesalers.

The proportion of manufacturers planning to expand their inventories in the fourth quarter over those of last year was somewhat less than the proportion of either wholesalers or retailers who anticipated inventory increases. Two-thirds of the businessmen in all trade groups expected inventories to equal those of the fourth quarter of 1956.

A large majority, 85 per cent, thought they would need at least as many workers on their payrolls in the fourth quarter of 1957 as a year ago. That they would need more employees than in the fourth quarter of 1956 was expected by 20 per cent of the manufacturers of durable goods, ten per cent of the manufacturers of nondurables, seven per cent of the retailers, and six per cent of the wholesalers.

Half of the manufacturers of nondurable goods anticipated a year-to-year gain in new orders in the fourth quarter, while 47 per cent expected no change. For each durable goods manufacturer expecting a decline, five foresaw an increase in new orders. Over-all new orders among manufacturers in the first quarter of this year were about two per cent higher than those of the comparable 1956 period.

Cotton Acreage At Lowest Level

Cotton in cultivation on July 1 totaled 14,224,000 acres, a drop of 15 per cent from last year and the lowest on record according to the U. S. Department of Agriculture. The 1946-1955 total acreage averages 22,743,000 acres. The U.S.D.A. said that the 1957 cotton acreage allotment totaled nearly 17.7 million acres but that about three million acres, 1.4 per cent larger than last year, had been put into the soil bank.

With normal abandonment, the U.S.D.A. reported, acreage harvested would total about 13,723,000 acres. If

last year's yield is applied to this acreage, this would result in a cotton crop of between 11.5 and 12 million bales. The department said cotton is late in many parts of the country because of excessive rains and that weevil infestation is increasing in many states. Extra long staple cotton in cultivation totaled 82,400 acres compared with 43,500 acres last year and the 1946-1955 average of 46,400 acres.

June Rayon And Acetate Shipments

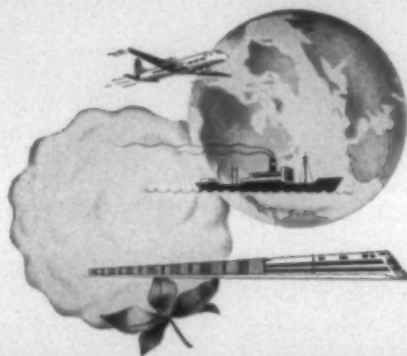
United States producers of rayon and acetate shipped a total of 84,500,000 pounds of yarn and staple in June, which included 82,700,000 pounds for domestic consumers and 1,800,000 pounds for the export trade, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. Total June shipments were 61½ per cent below the May level but eight per cent greater than June 1956 shipments of 78,200,000 pounds. For the first six months of the year, producers' shipments of rayon and acetate have aggregated 562,600,000 pounds, a figure two per cent below the 575,100,000 pounds shipped in the comparable 1956 period.

Producers deliveries of high tenacity rayon filament yarn in June amounted to 25,200,000 pounds, a decline of 14½ per cent from May and 1,200,000 pounds or 4½ per cent below June 1956 deliveries of 26,400,000 pounds. June shipments of regular+intermediate tenacity rayon yarn at 11,800,000 pounds were 12 per cent below May deliveries of 13,400,000 pounds but were about equal to June 1956 shipments.

In the acetate branch of the industry, higher shipments were recorded for both yarn and staple+tow. For acetate filament yarn, June shipments amounted to 17,500,000 pounds, a figure 6½ per cent greater than the 16,400,000 pounds shipped in May and 28½ per cent above June 1956 deliveries of 13,600,000 pounds. Similarly, shipments of acetate staple+tow at 5,300,000 pounds were 10½ per cent above May and 18 per cent above the 4,500,000 pounds shipped in June a year ago. On the other hand, rayon staple+tow shipments during June totaled 24,700,000 pounds, a 5½ per cent decline from the May level but 13½ per cent above the 21,800,000 pounds shipped last June.

Rayon and acetate yarn and staple in the hands of producers at the end of June totaled 125,300,000 pounds, an increase of two per cent from the May ending stock of 122,700,000 pounds.

The *Organon* reports that U. S. imports of rayon staple during April amounted to 7,349,000 pounds, a decline of 12½ per cent from the March total of 8,415,000 pounds. It is further noted that these imports have become successively smaller in each of the first four months of this year; however, the cumulative four-month 1957 total of 34,384,000 pounds was only four per cent below the 35,806,000 pounds imported during the same 1956 period. West Germany continues to be the major supplier of foreign rayon



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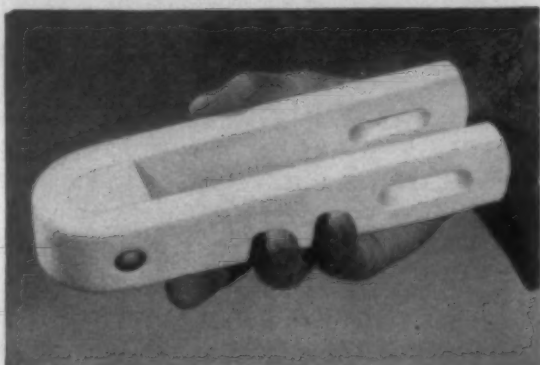
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staple, sending in 11,324,000 pounds or 33 per cent of the January-April total compared with 7,802,000 pounds or 22 per cent of imports during the first four months of last year. Certain other major supplying nations which increased their shares between 1956 and 1957 together with their respective percentages of total poundage for the period, were Italy with nine per cent and 14½ per cent, Austria 8½ and 10½ per cent, Switzerland seven per cent and 8½ per cent, Belgium seven per cent and eight per cent and Cuba five per cent and seven per cent. A notable occurrence in the *Organon* rayon staple import data is the virtual disappearance of the United Kingdom as a major supplying nation. The U. K. sent in 5,741,000 pounds of rayon staple during January-April 1956 and only 146,000 pounds in the same period this year, and her share of the total dropped from 16 per cent to less than one per cent over the period.

Imports of non-cellulosic man-made staple into this country amounted to 48,000 pounds in April compared with 39,000 pounds in the previous month. There were only two suppliers in April, with West Germany sending in 35,000 pounds and Italy sending in the remaining 13,000 pounds. The only other countries which have sent in any non-cellulosic staple during 1957 were Canada with 6,000 pounds and Switzerland with a small quantity in February. The cumulative four-month 1957 imports of this staple were 154,000 pounds which compares with 150,000 pounds imported in the same period last year.

May Cotton Consumption Off From Last Year

The Bureau of the Census reports that the total consumption of cotton in the U. S. during May 1957 was 672,756 bales, a loss of over 40,000 bales from the May 1956 total of 713,289 bales. Total cotton-growing states consumption during these periods was reported to be 644,283 and 676,198 bales, respectively. Cotton consumption in New England during May 1957 was 24,534 and 32,408 bales during May 1956.

Daily average cotton consumption in the U. S. was reported to be 33,638 during May 1957 and 35,664 during the same month last year. Cotton-growing states consumed a daily average of 32,214 bales during May 1957 and 33,810 bales during May 1956. In the New England states, May 1957 saw a daily average consumption of 1,227 bales as compared with 1,620 bales during the same month last year.

A state-by-state breakdown of the daily average consumption of bales of cotton in the cotton-growing states during May 1957 shows: Alabama—3,429; Georgia—6,396; North Carolina—9,923; South Carolina—9,874; Tennessee—767; Texas—569; Virginia—831; and other states—426. Daily average cotton fiber staple consumption figures are based on a five-day week with no adjustment for holidays. For this report the number of work days used by the Census Bureau was 20 for both May 1956 and 1957.

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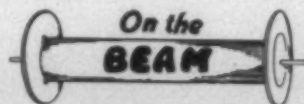
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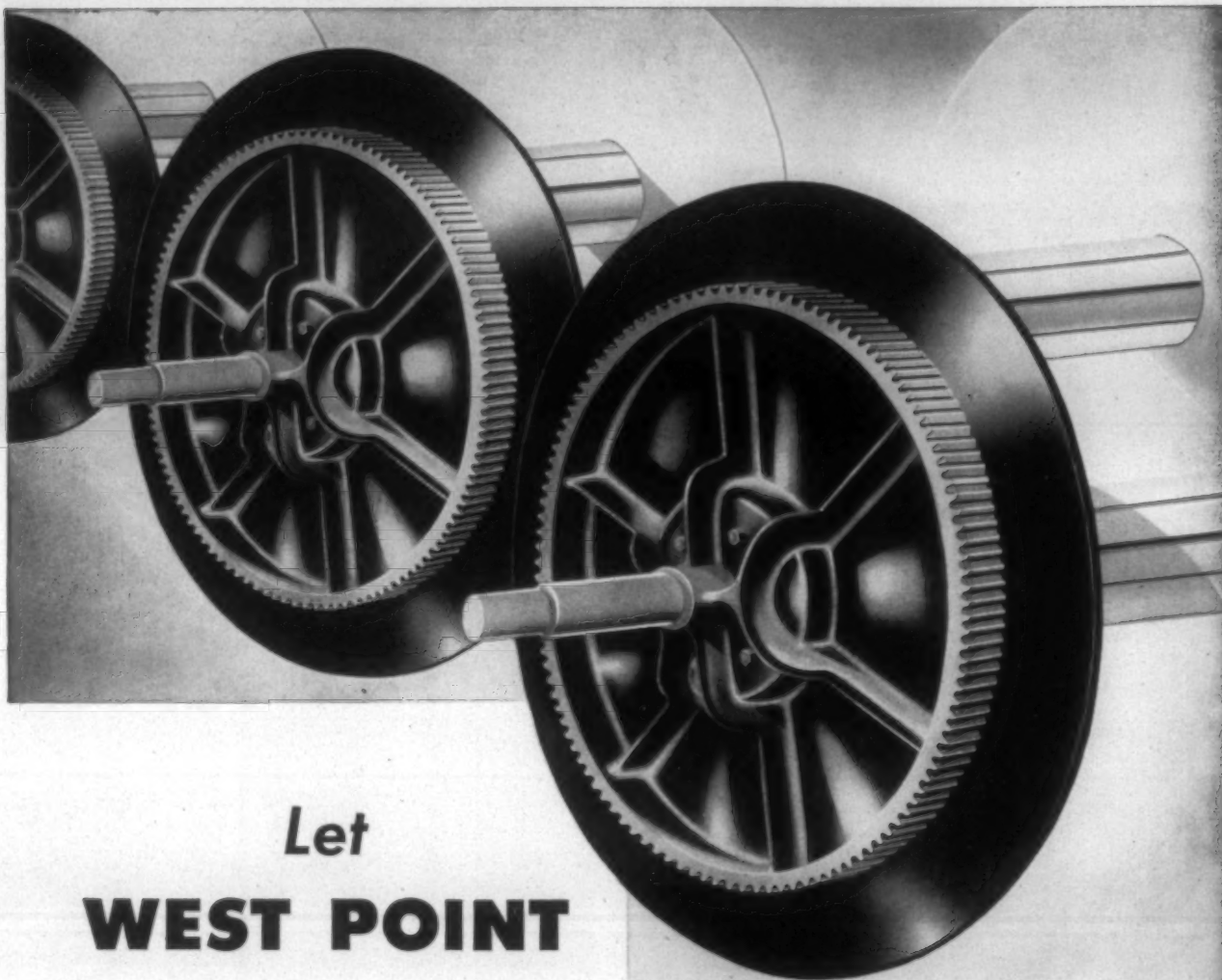
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